PENSION FUND INVESTMENT AND ECONOMIC DEVELOPMENT IN NIGERIA

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ABSTRACT

This study examined the link between pension fund investment and Nigeria's economic development. The study used investments in money market instruments, federal government securities, quoted ordinary shares, and corporate loan instruments as indicators of pension fund in Nigeria; while human development index (HDI) was used to represented economic development. National Pension Commission, World Bank, and National Bureau of Statistics secondary time series data from 2004 to 2020 were used and analyzed using descriptive statistics, correlation, and Fixed/Random Effects Regression Model. The study found that pension fund investments in money market instruments had a negative and insignificant influence on HDI, while pension fund investment in federal government securities had a positive and insignificant effect on HDI. Pension fund investment in quoted ordinary shares and corporate debt securities have positive influence on Nigeria's economic development in terms of the HDI. The study concludes that pension fund investment influence economic development in terms of HDI and recommends that, for improved economic development in terms of HDI, pension funds should be invested more in ordinary shares and corporate debt securities; and that pension fund investment in money market instruments should be discouraged while investment of pension funds in federal government securities should be done with caution.

Keywords: Pension fund investments, federal government security, quoted ordinary shares, corporate debt instruments.

INTRODUCTION

Pension fund is a pool of employees' and employers' contributions that accumulates capital to be paid to employees upon retirement (Odia & Okoye, 2012). Pension fund have been known to aggregate large sums of money that is often invested in into the capital market such as bonds and stocks to generate returns. The key purpose pension fund is to help employees save for retirement during their working lives. They do this by making a lump sum contribution or by creating an annuity into which they make regular (monthly, quarterly or yearly) contribution. Pension fund serves as a source of funds to fund-deficit economic units, such as corporate bodies, some individual households (through securitized loans), or even the government for investment in the economy. Pension fund is like social assistance. Employees who work for an organization after retirement should be provided a lump payment (gratuity) and monthly pension to take care of themselves during retirement (Akinyosoye, 2011).

Pension funds are vital for economic development and advancement through investing retirement savings to boost retirees' post-work wages. American Academy of Actuaries (AAA) (2004) says a pension scheme should provide post-employment income. Pension funds have increasingly diversified into new asset classes to enhance income. Infrastructure finance and investment appealed to many pension plans and pension fund investors. Poverty abatement in Nigeria cannot be realized without a legal framework to match long-term pension assets (Queisser, 2018).

Despite its significant central potentials, Nigeria has found it difficult to convert her distinctive resources into economic and social benefits for the majority of her citizens. Drop in oil price has diminished government income which is 80% oil-dependent. The present administration thus, faxes a challenge of dividing scarce resources between funding new development initiatives and maintaining existing ones. This is resulting in development shortage that is affecting the general population's way of life. Hence, novel finance frameworks are needed. The 2014 pension reform Act was aimed to minimize a rapid reduction in workers' financial capability and living quality when retirees' monthly salaries and benefits stopped. The Act intends to provide public and private sector retirees with a fair income, which would promote their consumption, investment, and savings. The delays and in some cases, failure of government at different levels to pay pensions and gratuities have negatively affected retirees' savings, investment, and consumption, hence their human development index (HDI) (Fernando, 2020).

The present study opts to assess the extent to which pension fund investments in Nigeria have influenced economic development. The study employs money market instruments, federal government securities, quoted ordinary shares, and corporate debt securities as indicators of pension fund investment, while HDI is used as a proxy of economic development. The following hypotheses are thus formulated to guide the study:

Ho_1: There is no significant relationship between investing pension funds in money instrument and human development index in Nigeria.

Ho_2: There is no significant relationship between investing pension funds in federal government securities and human development index in Nigeria.

Ho_3: There is no significant relationship between investing pension funds in quoted ordinary shares and human development index in Nigeria.

Ho4: there is no significant relationship between investing pension funds in corporate debt securities and human development index in Nigeria.

REVIEW OF RELATED LITERATURE

Theoretical Framework

Many theories have been developed in relation to pension fund investment globally. Meanwhile, two theories that underpin this study are the immunization theory (Lucas & Zeldes, 2016) and the life-cycle theory (Modigliani & Brumberg, 1950). Pension fund immunization theory protects investors from tiny interest rate changes. Proponents of this approach say a pension fund should back liabilities with assets so that the same financial circumstances effect both (Lucas & Zeldes, 2016). To protect the fund from losses, the fund’s asset interest rate must be equivalent to its obligations; and also cover future liabilities (Petersen, 2016).

The life-cycle theory on the other hand, divides pension fund development into start-up, growth, and maturity stages. The idea covers the three stages of pension fund management and their funding demands. Life-cycle theory suggests that pension fund administration and funding sources are connected to their phases of development and economic growth. Pension fund investments can create financial resources for additional investment gains, redistributing income and increasing pension participants' wealth. Life-cycle theory thus relates to pension fund investment and economic development (Zeller et al., 2011). This study seeks to empirically examine this connection.

CONCEPT OF PENSION FUND INVESTMENT

Nigeria's pension system began in 1951 and was modeled after the British pension system. This largely because Nigeria's pension system came into being through the Pension Ordinance instituted by the Britain, as Nigeria's colonial master. The initiative however, was intended to serve mainly British nationals stationed in Nigeria. The 2004 pension legislation, abolished by the 2014 Pension Reforms Act (PRA), was aimed to prevent a precipitous reduction in workers' financial ability and living standard when retirees' monthly income and allowances stopped. PRA aims to give public and private retirees with a respectable income, which will likely enhance their consumption, investment, and savings. The plan was to encourage economic growth by investing cash (FGN, 2014).

PRA mandate the National Pension Commission to implement investing limits to safeguard pensioners' interests. PRA consider instruments' registered risk ratings before investing pension funds. Nigeria's money market has remained active due to commercial banks, the capital market has not. Thus, pension funds had to be put in capital market instruments, which would develop the economy indirectly. Nigeria's pension fund come mostly theory the contributory pension scheme - a fund set up by employee and employer for retirement (Odia & Okoye, 2012). It is paid monthly, quarterly, or at intervals so workers may use it in retirement. It is contributory because employers of labour pays a specific amount based on worker's gross wage and the worker contributes at intervals (Pension Act, 2004). The importance of contributory pension fund has made a funding source of choice for many nations. Several countries have adopted contributory pension schemes, in which employees and their employers contribute a proportion of their consolidated earnings to Retirement Savings Accounting (RSA) from which they would get pension payments after retirement (Peterside, 2006). Pension funds may be invested in different ways, including, in money market instruments, federal government securities, quoted ordinary shares and corporate debt securities.

Investment in Money Market Instruments: This is a specialized market where stock is traded. It is a market where borrowers and lenders trade in short-term instruments. Short-term instruments are equities and money market products. The money market exists to raise short-term capital from surplus to deficit economic units. This market offers short-term money to economic units in need. Surplus funds are invested in the money market for interest. Local and foreign investors in of need short-term funding use the money market. It also gives provides discount bills, invoices, and other short-term funding. Money market products have one-year or shorter maturities (Ezirim, 2005).

Investment in Federal government Securities: Pension funds may also be invested in government securities. Pension funds is invested in government securities for cheap interest and assured payback. Bonds and other debt obligations are government securities. Governments frequently issue them with a repayment requirement when they mature. Government bonds are low-risk investments. They have government backing, which generates tax and other money. The central bank of a country sells debt instruments to manage money supply in the economy. Pension fund investments in government securities help raise funds and influence the economy (Balogun, 2016).

Investment in Quoted Ordinary Shares: Quoted ordinary shares are equity shares. In this example, they mean stocks. Each share gives the shareholder a vote at the annual general meeting and dividends from reported earnings. Quoted ordinary shares do not guarantee a dividend, unlike preferred shares. Pension funds are often invested in regular company shares. These are done for capital gains or dividends. Ordinary shares are company capital units traded on the stock exchange. Based on the financial statement, the board of directors decides whether to issue dividends and how much to pay (Micah & Obah, 2016).

Investment in Corporate Debt Securities: Some pension funds are invested in business debts. Debentures and bonds are long-term obligations. Debenture is a business loan. Its investors do not have rights on specific firm assets, but on the company's creditworthiness (Ezirim, 2005).

CONCEPT OF ECONOMIC DEVELOPMENT

Development is the process of improving the quality of life and making sure that citizens of a State or nation have access to the basic necessities of life; and the opportunity to make choices (Igwe & Ateke, 2019). It is a growth process that employs systematic and technical knowledge to meet specific economic growth and human development requirements, including health, education, and clean environment (Nwulu & Ateke, 2014). Economic development is thus a persistent expansion from a simple, low-income economy to a contemporary, high-income economy. It requires creating a balance in all economic sectors, including agriculture, banking, industry, health, and education. Poverty, low per capita income, inequitable housing distribution, poor capital development, inefficiencies in resource mobilization, over-reliance on oil as a key source of revenue, unemployment, and inflation are some of Nigeria's economic challenges (Adejumo & Adejumo, 2014). Harelimana (2018) defines economic development as the rise in a country's GNP per capita over time. Satope and Akanbi (2014) say economic growth requires an increase in output and a shift in technological and institutional arrangements. Economic development provides a sustained living, education, and basic healthcare for most of the population (Belshaw & Livingstone, 2002). Economic development is a persistent growth in real GDP or GDP per capita. Rapid economic development may change a poor nation into a prosperous one, as Hong Kong, South Korea, Taiwan, and other Asian nations have experienced (Adejumo & Adejumo, 2014).

This study used human index development (HDI) as a proxy of economic development. Nzotta and Okereke (2009) views HDI as a composite measure that combines health, education, income, security, and other variables. Nseabasi (2012) said the goal of human development is to assess a nation's environment for personal success. Ogen (2003) discovered that a company's living and working circumstances improve with greater HDI. Lawal (1997) says the primary principle of HDI is that people are a nation's actual value and that governments should care about human lives. HDI assesses long-term growth in three core areas of human development: access to safe and healthy life, education, and a reasonable living standard (United Nations Development Programme [UNDP], 2014). HDI is considered a more comprehensive picture of development than per capita income, and is mostly looked at, from the perspective of improving people’s living standards, expanding their options; and not just expanding money or riches (UNDP, 1992).

The UN created the HDI to rank nations' social and economic development based on Health Index, Education Index, and Standard of Living Index.

EMPIRICAL REVIEW

Baridoo and Micah (2019) evaluated the association between contributory pension fund and economic growth in Nigeria from 2014 to 2016; and reports that a negative and negligible link between private pension contributions and GDP and per capita income. Similarly, Ameh et al. (2017) evaluated pension fund scheme's influence on Nigeria's economic growth and found that pension fund assets or pension contributions and savings had a favorable but not significant effect on economic development. In another study, Eke and Onafalujo (2015) analyzed interest rate, capital market, and pension assets in Nigeria during 1981-2013. They reported that pension asset is directly impacted by stock market index, whereas index is inversely connected to short-term interest rate. The higher short-term interest rate environment may not be beneficial for accumulating capital market pension assets.

Alos, Michael (2017) studied the influence of government human capital investment on economic growth in Nigeria, South Africa, and Ghana from 1980-2013. The study found that health and education have a substantial positive influence on growth only in Nigeria, whereas literacy ratio showed a positive but insignificant effect in all the nations covered in the study. Eneisik (2021) used data from 1960-2019 to assess the influence of public spending on Nigeria's human capital development. Central bank statistical bulletins and UNDP reports provided secondary data for the time under study. The study found that spending in public education and health positively affect human development index; and public spending on education and health boosts Nigeria's HDI.

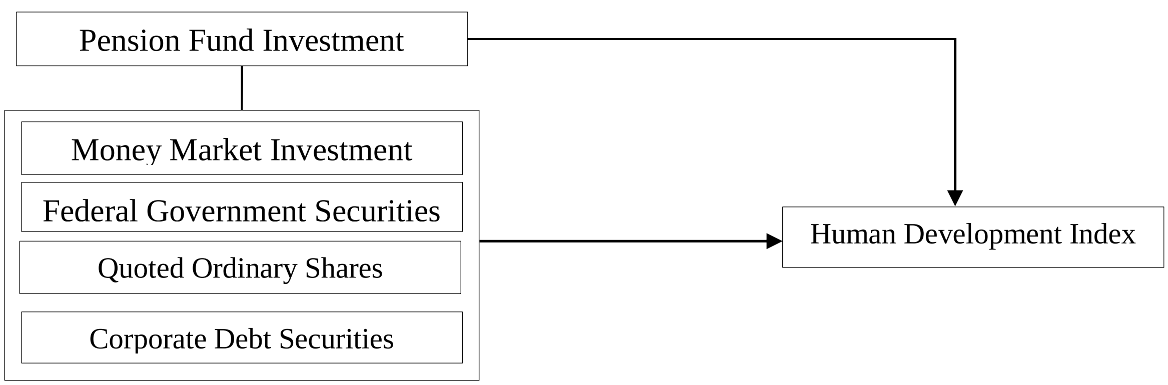

Fig. 1: Conceptual framework of pension fund investment and economic development in Nigeria
Source: Okiakpe, E. K. (2021); Odia and Okoye (2012) and Werigbelegha and Ari (2017).

METHODOLOGY

This study focused on evaluating pension fund investment and economic development, proxied by HDI. The study adopted an ex-post facto research design. The study's population includes all 22 pension fund administrators (PFAs) in Nigeria and yearly pension fund data from PenCom, NBS, the World Bank, and CBN. The study's sample spanned 2004-2020, when yearly data were more readily available than quarterly or monthly data. Systematic sampling was employed to establish a conclusion about a certain time period. The data came from secondary sources including CBN bulletins, NBS publications, and National Pension Commission annual reports.

Fixed/random effects regression models were utilized to characterize the connection between dependent and independent variables.

The model below is employed to show the effect of pension fund investment on economic development:
HDI= bo+bIMMI+b2IFGS+b3IQOS+b4ICDS+et…… Equation1
Where:
IMMI = Investment in money market instrument
IFGS = Investment in federal government securities
IQOS = Investments in quoted ordinary shares
ICDS = Investment in corporate debt securities
HDI = Human Development Index
B = Intercepts;
B1, B2, B3, B4 = Coefficient of each of the independent variables;
e = Random error terms
If the probability value is larger than 0.05, the null hypothesis is rejects (De Vaus, 2011).

RESULTS AND DISCUSSION OF FINDINGS

This analysis used pension fund investments in money market instruments, federal government securities, quoted ordinary shares, and corporate debt securities. The human development index in Nigeria for 2004-2020 was used to measure economic progress.

Table 1 Regression Analysis

Variable	Coefficient	Std. Error	t-Statistic	Prob.
ICDS	0.012188	0.007219	1.688391	0.1171
IQOS	0.001516	0.001344	1.127834	0.2814
IFGS	0.000208	0.001463	0.142038	0.8894
IMMl	-0.00266?	0.001595	-1.672170	0.1203
C	0.467711	0.096462	4,750162	0,0005
R-squared	0.685202	Mean dependent var.		0.493647
Adjusted R-squared	0.580270	S.D. dependent var.		0.038751
S.E. of Regression	0.025105	Alkalike info criterion		-4.291550
Sum squared resid	0.007563	Schwaz criterion		-4.046487
Log likelihood	41.47817	Hanna-Qulnn criter		-4.267190
F-statistic	6.529932	Durbin Watson stat.		1.448027
Prob. (F. statistic)	0.004974			

Source: E-Views 10 Output Computed by Researcher
Dependent Variable: HDI
Method; Least Squares
Date; 01/24/22

Time: 12:22
Sample: 2004 2020
Included observations: 17

HDI - 0.468+0.0021IFGS +0.00152IQOS +0.0122ICDS - 0.0027IMM1 is model 1's regression equation. If the independent variables do not change, the HDI will be 0.468. HDI and Money Market investing are inversely related. Any increase in IMMI reduces HDI by its coefficient. Increasing IMMI lowers HDI. HDI is unrelated to IMMI. Adjusted R-squared tests the model's independent variables, as given in the table above. Model R2 is 58%. Because R2 is over 50%, our model is relatively well-fit. By implication, it suggests that 58% of the changes in HDI (the dependent variable) were driven by our model's independent variables, with the other 42% accounted for by the error term. The F-statistic assesses the overall importance of the model's explanatory parameters and indicates the model's suitability for the analysis; the probability value signifies the model is statistically significant and valid in explaining the dependent variable's outcome. F-statistics is 6.53 and its probability is 0.0049, which is less than 0.05. The model is free from autocorrelation since the Durbin Watson statistic of 1.45 is slightly above, indicating no serial autocorrelation. Existing accounting theory determines the apriori criterion and the variables' signs and magnitudes. IMMI's value is -1.672. In HDI model, IMMI lowers HDI by 167%. ICDS, IQOS, and IFGS displayed positive indications in HDI model, with values of 1.688, 1.128, and 0.142. This means that increase in those factors will lead to various HDI increases, as evidenced by their positive coefficients. The model's global utility makes it dependable for drawing inferences about estimated connections

The results in Table 1 show that:

1) With a t-value of -1.672170 and p-value of 0.1203. Since p>0.05, investing pension funds in money market instruments do not impact Nigeria's human development index.
2) With a t=0.142038 and p=0.8894. Since p>0.05, investing pension funds in government securities does not influence Nigeria's HDI.
3) With s t-value of 1.127834 and p-value of 0.2814. Since p>0.05, investing pension funds in listed ordinary shares does not influence Nigeria's HDI.
4) With t=1.688891 and p=0.11171. Since p>0.05, pension fund investments in corporate debt instruments do not influence Nigeria's HDI.

DISCUSSION OF FINDINGS

This study focused on examining the influence of pension fund investment on economic development. Pension fund investment is measured through investment in money market instruments, federal government securities, ordinary shares and corporate debt instruments; while economic development is proxied by HDI. The statistical analysis reveals that pension fund investment in money market instruments affects HDI negatively. This means that increased pension fund investments in money market instruments lowers HDI. This result supports the report of Baridoo and Micah (2019) that contributory pension have a positive and significant relationship between with real GDP and Per Capita Income and a negative and insignificant relationship between private sector pension contribution and Real GDP and Per Capita Income.

The study also found that pension fund investments in federal government securities have a positive, but insignificant influence on HDI. This means that increase in pension fund investments in federal government securities will not result in considerable improvement in

Nigeria's HDI. This finding cohere with the report of Werigbelegha and Ari (2017) that total pension assets contributions from both the private and public sectors in Nigeria have not contributed positively to Nigeria's economic growth.

CONCLUSION AND RECOMMENDATIONS

In view of the inferences made from the statistical analyses and the discussion of findings in the preceding sections, the study concludes that pension fund investments affects HDI positively, through investment in listed ordinary shares and corporate debt instrument, while pension fund investment in money market instrument and have negative influence of HDI. The study further takes the position that pension fund investment in federal government securities has positive but statistically insignificant influence on HDI. The study thus recommends that, for improved economic development in terms of HDI, pension funds should be invested more in ordinary shares and corporate debt securities. The study also recommends that investment of pension funds in money market instruments should be discouraged while investment of pension funds in federal government securities should be done with caution.

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