

Effect of Insurance Funds on Human Development Index in Nigeria

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Abstract

The main objective of this study was to evaluate the effect of insurance funds on human development index in Nigeria between 2012 and 2022. The design adopted for this study was ex-post-factor; data used for analysis were elicited from Central Bank Statistical Bulletin, World Bank Developmental Indicators Data base and National Insurance Commission Annual Reports. To achieve this objective, a model was formulated based on empirical and theoretical reviews. The model used human development index in Nigeria as the dependent variable, while life insurance funds, pension funds and deposit administration funds were the independent variables in the model. This study employed the Fully Modified Least Squares (FMOLS) Model to analyze data. The findings elicited from this study revealed that life insurance funds and pension funds recorded significant positive effect on human development index, while deposit administration funds had a significant negative effect on human development index in Nigeria. From the inferential result, the researcher concluded that insurance funds have significant effect on human development index in Nigeria. From the foregoing, the researcher recommended that the National Insurance Commission, in conjunction with the government should efficiently work together to ensure that the premium collected, and the income generated by the industry through pension funds and life insurance are diversified into economic and productive investment, in order to boost human development in Nigeria.

Keywords: *Deposit Administration Funds, Human Development Index, Insurance Funds, Life Insurance, National Insurance Commission, Pension Funds.*

Introduction

The world we live in is full of uncertainties and risks [1]. Individuals, families, businesses, properties, and assets are exposed to different types and levels of risks. These includes risk of losses of life, health, assets, property, etc. while it is not always possible to prevent unwanted events from occurring, financial world has developed products that protect individuals and businesses against such losses, by compensating them with financial resources. Insurance is a financial product that reduces or eliminates the cost of loss, or effects of loss caused by different types of risks. Apart from protecting individuals and businesses from any kind of potential risks, the insurance sector contributes significantly to human development

index of the nation, by providing stability to the functioning of businesses and generating long-term financial resources for citizens and industrial projects. Among other things, the insurance sector also encourages the virtue of savings among individuals and generates employment among the populace [2]. Moreover, Insurance provides financial support and reduces uncertainties in business and human life. It provides safety and security against particular events. There is always a fear of sudden loss, which insurance provides cover against. Also, Insurance facilitates the spreading of risk, from the insured to the insured, which is the basic principle of insurance.

Insurance also represents a promise of future compensation relating to specific losses, in exchange for periodic payments. Insurance is similar to banks and capital markets, as they solve the need of business units and private households in financial intermediation. The only way out is to reposition organizations and businesses to meet with the demand of the period, create awareness about the industry, training and retraining of staff, minimization of the wastages and maximization of gains in the interest of the economy [3]. Moreover [4] asserted that managing risk is an important function for business organizations dealing with money, which includes banks and insurance firms. Hence, in doing this, the insurance industry enhances national development through effective wealth creation, protection and consideration of funds lent. However, for any insurance contract to be valid there must exist an insurable interest and utmost good faith, which requires both parties to the insurance contract to make full disclosure of all material facts, before indemnity on a financial loss, or the happening of the event insured against, can be claimed. In view of this, [4], in his studies concluded that the importance of insurance to any nation's economy cannot be undermined. He said no country can experience a meaningful development without the presence of a formidable insurance industry. This makes insurance business in any nation indispensable, irrespective of its weak contribution to the Gross Domestic Product (GDP) or its level of awareness among the populace, as it is vital to the well-being of and smooth functioning of a modern economy [1].

From the foregoing, insurance services have come to be recognized by both individuals and corporate bodies to be an effective tool for the transfer of risks, which are vital for economic growth and human development. These services enable people to carry out their economic activities, unmindful of the adverse effect of the risk.

Statement of Problem

The gap between insurance funds and the Human Development Index (HDI) in Nigeria poses significant challenges to the country's socio-economic development. Despite the existence of insurance mechanisms, there is a lack of alignment between these financial instruments and the improvement of human well-being, as measured by the HDI. This misalignment raises concerns regarding access to insurance, the effectiveness of risk mitigation, and its overall impact on the quality of life for Nigerians. A significant portion of Nigeria's population lacks access to insurance services, particularly in rural and underserved areas. This limited accessibility deprives a substantial portion of the population of the protective shield that insurance can provide against unforeseen events, including health emergencies, property damage, and loss of livelihoods. As a result, the country's HDI is adversely affected, with a high prevalence of vulnerabilities and disparities in well-being. Also, the insurance industry in Nigeria often focuses on lucrative markets, such as urban centers and high-net-worth individuals. This has led to the neglect of critical sectors such as agriculture, which is the backbone of the nation's economy. Without adequate insurance coverage for farmers and agricultural activities, Nigeria's vulnerability to crop failures, extreme weather events, and economic shocks intensifies, thereby undermining progress in the HDI. In the same vein, Nigeria's insurance penetration rate remains significantly lower than the global average. This low insurance penetration translates into a lack of preparedness among individuals and communities to cope with unexpected setbacks, whether in terms of health, education, or economic stability. Inadequate insurance coverage is a stumbling block in the nation's efforts to improve human development outcomes. Finally, many Nigerians hold skeptical views about insurance, often due to negative perceptions of the industry and a lack

of trust in insurers. This skepticism can deter individuals from purchasing insurance policies, even when it could significantly mitigate risks to their well-being. Addressing these perception and trust issues is vital for improving insurance uptake and, consequently, the nation's HDI.

The relationship between insurance funds and human development is a critical aspect of a nation's economic and social well-being. In Nigeria, a country grappling with developmental challenges, understanding the issues that hinder the alignment of insurance funds with the Human Development Index (HDI) is of paramount importance. This article seeks to investigate and address the underlying issues that hinder the synergy between insurance funds and the enhancement of Nigeria's Human Development Index.

Objectives of the Study

Generally, the objective of this study is to examine the effect of insurance funds on human development in Nigeria. Other specific objectives are to:

1. Examine the influence of life insurance funds on human development index in Nigeria.
2. Ascertain the influence of pension funds on human development index in Nigeria.
3. Evaluate the influence of deposit administration fund on human development index in Nigeria.

Hypotheses of the Study

The following null hypotheses have been developed with a view to achieving the research objectives:

H0₁: There is no significant influence of life insurance funds on human development index in Nigeria.

H0₂: Pension funds has no significant influence on human development index in Nigeria.

H0₃: There is no significant influence of deposit administration fund on human development index in Nigeria.

Conceptual Review

Insurance

Insurance is a means of protection from financial loss. It is a form of risk management, primarily used to hedge against the risk of a contingent or uncertain loss. An entity which provides insurance is known as an insurer, insurance company, insurance carrier or underwriter. A person or entity who buys insurance is known as an insured or policyholder. The insurance transaction involves the insured assuming a generated and known relatively small loss in the form of payment to the insurer, in exchange for the insurer's promise to compensate the insured in the event of a covered loss [2]. The loss may or may not be financial, but it must be reducible to financial terms, and usually involves something in which the insured has an insurable interest, established by ownership, possession or pre-existing relationship. In practice, the insured receives a contract, called the insurance policy, which details the conditions and circumstances under which the insurer will compensate the insured. The amount charged by the insurance policy is called the premium. If the insured experiences a loss, which is potentially covered by the insurance policy, the insured submits a claim to the insurer for processing by a claim adjuster. However, the insurer may hedge its own risk by taking out reinsurance, whereby another insurance company agrees to carry some of the risk, especially if the risk is too large for the primary insurer to carry.

Life Insurance

Life insurance is a financial contract between an individual (the policyholder) and an insurance company. In exchange for regular premium payments, the insurance company provides a payout (the death benefit) to the policyholder's beneficiaries upon the

policyholder's death. Life insurance serves several key purposes:

1. **Financial Security:** Life insurance offers a financial safety net to the policyholder's dependents and loved ones in the event of the policyholder's death. This ensures that beneficiaries can maintain their standard of living and meet financial obligations.
2. **Estate Planning:** It can be used as a tool for estate planning, helping to cover estate taxes and other financial responsibilities after one's passing.
3. **Investment and Savings:** Certain life insurance policies, such as whole life or endowment policies, have a savings or investment component, allowing policyholders to accumulate cash value over time.
4. **Loan Collateral:** Life insurance policies with cash value can be used as collateral for loans or withdrawals to address financial needs during the policyholder's lifetime.

In Nigeria, life insurance plays a crucial role in providing financial protection and security to families, ensuring that they can continue to meet their financial needs even in the absence of the primary breadwinner. However, insurance penetration in Nigeria is relatively low, and affordability remains a challenge for many citizens, particularly those in lower-income brackets.

Human Development Index (HDI)

The Human Development Index (HDI) is a composite measurement developed by the United Nations to assess the overall development of countries. It takes into account three key dimensions of human well-being:

1. **Life Expectancy:** This dimension reflects the average life expectancy at birth. It indicates the overall health and healthcare access in a country.
2. **Education:** Education is measured through a combination of indicators, including expected years of schooling for children and average years of schooling for adults.

It reflects the population's access to and attainment of education.

3. **Per Capita Income:** This dimension assesses the average income of a country's citizens. It is often used as a proxy for the standard of living and economic well-being.

Nigeria has made progress in improving life expectancy over the years, but challenges related to healthcare access and quality persist, impacting this component of HDI. Nigeria faces challenges related to educational access and quality, particularly in rural areas. These challenges can affect educational attainment and, subsequently, the education component of HDI. In terms of per capita income; income inequality is a notable issue in Nigeria, with disparities between urban and rural areas and different income groups. This impacts the per capita income component of HDI. Life insurance in Nigeria serves as a mechanism for providing financial security and protection to families, contributing to individual and household well-being. On the other hand, the Human Development Index assesses a country's overall development by considering life expectancy, education, and per capita income. In Nigeria, addressing challenges related to healthcare access, education, and income inequality is essential for improving the country's HDI and, by extension, the well-being of its citizens.

Pension in Nigeria

Pension is the amount paid by government or company to an employee after working for some specific period of time, considered too old or ill to work or have reached the statutory age of retirement [5]. In this direction, it is safe to refer it as the monthly sum paid to a retired officer until death because the officer has worked with the organization paying the sum. It was in this perception that [6] asserts that pension is the method whereby a person pays into pension scheme a proportion of his/her earnings during his working life.

A greater importance has been given to pension and gratuity by employers because of the belief that if employees' future needs are guaranteed and confidence restored in the contributory pension scheme, they would be more motivated to contribute positively to organization's output. According to [7], pension consists of lump sum payment paid to an employee upon his disengagement from active service. Study maintains that pension plans may be contributory or not; fixed or variable benefits; group or individual; insured or trustee; private or public, and single or multi-employer. [8] and [9] stated that there are four main classifications of pensions in Nigeria. This suggests that there are Retiring Pension which is usually granted to a worker who retire after completing a fixed period of quality service. Consequently, pension can be defined as a fixed regular sum paid to a person, following retirement on having attained the retirement age or decided to disengage from service before his/her retirement date or health grounds [10]. Therefore, this goes to suggest that pension creates an impression in retirees that there is life after active service.

The Role of Insurance in Nigeria Economy

Insurance keeps assets and life under guarantee. Insurance plays a great role both in developed and developing countries' economies. Insurance provides safety and security: Insurance always provides financial support and decreases dangers in economic and social life. For example, we can say that in the case of life insurance financial assistance guarantee to the family of the insured on his death: Insurance makes financial resources: As economic category insurance, which is part of the financial system, is the foundation and utilization process of the targeted finance funds established to eliminate the damage from the sudden accidents and emergency, to provide financial support to the citizens in the accidents connected with their private lives [11-13] Insurance always protects people from loss, from danger. Many people know that danger

can occur all the time. For this reason, a person who wants to ensure his property, pays some insurance premium to the insurance company. So, his property is guaranteed by the insurance company. Whenever a loss occurs, it is compensated out of funds of the insurer. With this process, insurance spreads risk in life. In addition to eliminating risk for the individual through transfer, the insurance device reduces the aggregate amount of risk in the economy by substituting certain costs for uncertain losses [14-16].

Theoretical Framework

Few financial propositions supporting insurance activities in an economy include the growth theory and the theory of financial intermediation. This study is however anchored on the theory of financial intermediation.

The Growth Theory

1. The growth theory was propounded by R. U. Herrod and E. Domar in 1955. The theory states that demand does not automatically equal supply, nor does saving automatically equal investment. The growth theory states that well developed financial intermediation can promote human development index through marginal productivity of capital efficiency in channeling savings to environment, saving rate and technological innovations.

The channel to growth model tries to link the financial intermediation function of insurance companies to economic growth. According to [17], this theory is relevant to the study of when life insurance reserves can be used as approximation of the investment function. They used technical reserves of both life and non-life insurance companies as proxy for their investment function, and the expected effect on human development index was positive. Life and non-life insurance as a financial intermediation

activity, contributes to economic growth, through accumulation of productive capital within an economy, and the improvement of the efficiency of investment. From the growth theory, it was discovered that the insurance sector fosters human development index in the following ways.

- i) Providing broader insurance coverage directly to firms, as well as improving their financial soundness.
- ii) Fostering entrepreneurial attitudes, encouraging investment, innovation, market dynamism and competition.
2. iii) Promoting sensible risk management by households and firms and contributing to sustainable and responsible development.

3. **Empirical Review**

It has been realized that very few studies have been done on insurance and economic growth. Significant of such studies are those of [18] examined the relationship between human development index and insurance sector growth. The study employed fixed effect model and cointegration analysis to determine the short-run and run relationship between economic growth and insurance sector growth and development in Nigeria. The result reveals that insurance sector growth and development positively and significantly affect economic growth. The study recommended that National Insurance Commission (NAICOM), in collaboration with the Federal Government should enforce laws on insurance practice in Nigeria.

In a similar study, [19] conducted a study on the impact of insurance contributions on human development index in Nigeria. The study used dynamic factor model to analyze the functional relationship between the volume of insurance contributions and economic growth in Nigeria. The results showed that insurance contributes

greatly to economic growth in Nigeria. The study recommended that the National Insurance Commission should efficiently work together to ensure that the premium collected, and the income generated by the industry, are diversified into economic and productive investment. [20] investigated the effect of life insurance on human development index and what conditions affect the insurance growth nexus. The study adopted secondary data using multiple regression statistical tools. The findings confirmed the positive impact of the development of the life insurance market on economic growth.

In the same vein, [21] studied the relationship between insurance and economic growth, a theoretical and empirical analysis. They applied a cross country panel analysis using annual insurance premium data from 29 European countries over 1992 to 2004. It was revealed that there is weak evidence for a growth-supporting role of life insurance to bank and stock sector.

Dwelling on the same subject matter, [22] study explored the relationship between Nigeria's insurance industry and economic growth from 2001 to 2017. This study used descriptive stats and multiple regression for analysis. Insurance investment, premium, and claims positively impacted GDP. The insurance sector has greatly aided Nigeria's economic advancement. Mandatory insurance policies recommended for individuals and businesses. Encourages investment, protects investors, promotes steady growth. Regulators should enforce transparent fund management by insurers. Insurers should diversify investments to boost returns and pay claims.

In a similar study, [23] analyzed insurance receivables' impact on Nigerian economic growth from 2008-2017. This study used panel data analysis to investigate the correlation between insurance industry indicators (life premium, non-life premium, and insurance investment) and economic growth. The study showed that life premium and human

development index related positively yet insignificantly, and non-life premium related negatively but insignificantly with economic growth. Insurance investment had no effect on economic growth. Nigerian insurance industry has little impact on economy. Policy makers should tackle insurance industry challenges from government and public. With policies and awareness, the industry can achieve its potential.

In another study, [24] studied the effect of inflation on insurance penetration in Nigeria from 1985 to 2016. Study used regression analysis and found inflation has a small positive impact on insurance penetration in Nigeria. The study recommends measures to reduce inflation in Nigeria, which will increase insurance penetration in the industry.

In the same vein, [25] linked insurance and human development index in Nigeria from 1996 to 2015. This study used OLS estimation. Insurance in Nigeria boosts economic growth. The government should boost the insurance industry with economic policies. Enforce insurances, enhance industry reputation with education campaigns.

Similarly, [26] employed Autoregressive Distributed Lag (ARDL) Method to examine the effect of life and non-life insurance on human development index in Nigeria. Evidence is found in the results of the analysis of an existence of a long-run relationship between premium for both life and non-life insurance and economic growth. Thus, the study concluded that life and non-life insurance complement each other to positively affect economic growth.

In another study, [27] examined the effect of portfolio investment of insurance on the gross domestic product of Nigeria. A strong relationship was established between relevant variables in the study. [28] used multiple regression method of analysis to examine the impact of insurance on human development index in Macedonia with data for the period of 1995 to 2010. The three indices of independent

variable used are Life insurance, non-life insurance and total penetration. The findings of the empirical analysis show that though, while the effect of life insurance is negative on the economy, there is a positive and significant effect of insurance development on economic development.

Methods

Research Design

This researcher would adopt the *ex-post facto* research design because secondary data is required.

Econometric Model Specification

This research adapted the econometric model previously used by [29] who empirically examined the effect of life and non-life insurance on human development in Nigeria between 2004 and 2013. The model of this study expanded the model used by [29] to accommodate other insurance funds such as pension fund and deposit administration fund. Thus, the model for this research is specified as follows:

$$\text{HDI} = f(\text{LIF}, \text{PEF}, \text{DAF}) \quad \text{Model (3.1)}$$

Where:

HDI = Human Development Index.

LIF = Life Insurance Fund.

PEF = Pension Fund.

DAF = Deposit Administration Fund.

From the above specified model, the econometric model for this research would be specified thus:

$$\text{HDI} = \beta_0 + \beta_1\text{LIF} + \beta_2\text{PEF} + \beta_3\text{DAF} + \mu \quad \text{Model (3.2)}$$

Where

μ - Stochastic variable.

f - Functional notation.

Method of Data Analysis

For the purpose of arriving at empirical results for this study, appropriate analysis was carried out involving descriptive and inferential statistics. The relevant statistics are mean,

standard deviation, minimum, maximum, range and number of observations. The inferential statistics are derivatives of regression analysis and would include R^2 , adjusted R^2 , t- statistics (t-stat.), Durbin-Watson (D-W) statistics, P-value and F-ratio. P-value is a margin to be used for acceptance or rejection of hypothesis and D-

W statistics for testing for the presence of 1st order autocorrelation. Decisions were made based on 5% level of significance.

Results

Unit Root Test

Table 1. Unit Root Test Result (Summary)

Variables	Levels					1 st Differences					Order of Integration
	ADF	Critical Values			p-value	ADF	Critical Values			p-value	
	t-stat	@ 1%	@ 5%	@ 10%	p-value	t-stat	@ 1%	@ 5%	@ 10%	p-value	
HDI	0.63873 6	4.420 595	3.2598 08	2.7711 29	0.8138	5.1456 25	4.5826 48	3.3209 69	2.8013 84	0.0052	I(1)
LIF	0.94587 3	4.420 595	3.2598 08	2.7711 29	0.9900	3.8700 52	4.4205 95	3.2598 08	2.7711 29	0.0212	I(1)
PEF	0.07007 0	4.297 073	3.2126 96	2.7476 76	0.9281	3.7508 21	4.5826 48	3.3209 69	2.8013 84	0.0285	I(1)
DAF	0.46230 6	4.297 073	3.2126 96	2.7476 76	0.8610	3.4692 47	4.5826 48	3.3209 69	2.8013 84	0.0412	I(1)

Source: Researcher's Computation (2023)

Table 1 showed the unit root test result on all the variables, and it indicated that they are non-stationary in the same order. This is proven by comparing the values presented carefully in the statistical test of Augmented Dickey Fuller (ADF) at 1 percent, 5 percent and 10 percent level of significance. From the test result, the variables showed difference at once and at first

difference, the variables are stationary. This means that the variables were in the same order integrated I(1). As such, the appropriate estimation technique to employ for inference the Fully Modified Least Squares (FMOLS) (Pesaran, et al. 2001).

Descriptive Statistics

Table 2. Descriptive Statistics

	HDI	LIF	PEF	DAF
Mean	0.512273	579.8864	548.6982	108.9427
Median	0.514000	481.1440	558.9600	124.4970
Maximum	0.546000	1254.450	908.0900	221.7500

Minimum	0.483000	121.7568	265.4900	17.78853
Std. Dev.	0.018336	394.4974	171.5561	72.46664
Skewness	0.285398	0.477505	0.388409	0.233246
Kurtosis	2.323329	1.822033	3.220500	1.756436
Jarque-Bera	0.359192	1.054007	0.298864	0.808530
Probability	0.835608	0.590371	0.861197	0.667467
Sum	5.635000	6378.750	6035.680	1198.370
Sum Sq. Dev.	0.003362	1556282.	294315.1	52514.14
Observations	11	11	11	11

Source: Researcher's Computation (2023)

The descriptive statistics presented in Table 2 show that LIF has the highest mean value of N5.79 billion, followed by PEF which has N5.48 billion, while DAF and HDI have N1.088 billion and 0.51 respectively. Note that the Mean describes the average value for each data series in the model. From the analysis, LIF has the highest Standard Deviation as it recorded approximately 394.5, implying that it is the most volatile variable in the model as it has the highest percentage of dispersion from the mean, while HDI recorded the lowest standard deviation with a figure of approximately 0.02. The Table further reveals that all the variables are skewed to the right. Kurtosis measures the peakness or flatness of the distribution of a series. The kurtosis of a normal distribution is 3. If it exceeds 3, it means that the distribution is peaked or leptokurtic relative to the normal. Conversely, if it is less than 3, it shows that the distribution is flat or platykurtic relative to the normal. Table 2 further reveals that PEF with a Kurtosis value

of 3.22 is peaked or leptokurtic. While the other variables with Kurtosis values less than 3 are flat or platykurtic.

Jarque-Bera (JB) tests whether the series is normally distributed or not. The test statistics measure the difference of the skewness and kurtosis of the series with those from a normal distribution. In JB statistic, the null hypothesis which states that the distribution is normal is rejected at 5% level of significance. From the results of the analysis presented in Table 3 above, all the variables had Probability values of greater than 0.05, as such, we conclude that all the variables are normally distributed. The number of observations of 11 depicts the duration or scope of this study, being 11 years. Although these skewness and kurtosis indicate departure from normality, such points are not strong enough to discredit the goodness of the dataset for the analysis in view.

Inferential Result

Table 3. Co-integration Regression Results

Dependent Variable: HDI		
Method: Fully Modified Least Squares (FMOLS)		

Date: 08/15/23 Time: 01:27				
Sample (adjusted): 2013 2022				
Included observations: 10 after adjustments				
Cointegrating equation deterministics: C				
Long-run covariance estimate (Bartlett kernel, Newey-West fixed bandwidth				
= 3.0000)				
Variable	Coefficient	Std. Error	t-Statistic	Prob.
LIF	3.98E-05	6.75E-06	5.899852	0.0011
PEF	4.44E-05	1.61E-05	2.749790	0.0333
DAF	-9.52E-05	3.39E-05	-2.807412	0.0309
C	0.475826	0.006050	78.64846	0.0000
R-squared	0.910276	Mean dependent var		0.515200
Adjusted R-squared	0.865414	S.D. dependent var		0.016396
S.E. of regression	0.006015	Sum squared resid		0.000217
Long-run variance	1.12E-05			

Source: Researcher's Computation (2023)

The Fully Modified Least Squares (FMOLS) result as shown in Table 3 above suggests that LIF and PEF have positive effect on the explained variable. While DAF had a negative effect on HDI. The result further reveals that a unit increase in LIF would bring about a 3.98 unit increase in Human Development Index,

while a unit increase in PEF would bring about a 4.44 unit increase in Human Development Index. Also, a unit increase in DAF would bring about a unit decrease in the Human Development Index.

A keen observation of the result showed that the R-squared and Adjusted R-squared was

approximately 0.91 and 0.86 respectively. This means that the explanatory variables accounted for about 91% variations in the explained variable. Put differently, about 91% variation in Human Development Index was explained by the independent variables, while the remaining

8% may be attributed to variables not captured in the model (stochastic variables).

Diagnostic Test

Variance Inflation Factors

Table 4. Variance Inflation Factors

Variance Inflation Factors			
Date: 08/15/23 Time: 01:29			
Sample: 2012 2022			
Included observations: 10			
	Coefficient	Uncentered	Centered
Variable	Variance	VIF	VIF
LIF	4.55E-11	21.31409	5.390787
PEF	2.61E-10	82.38789	4.802335
DAF	1.15E-09	18.69546	4.735134
C	3.66E-05	32.71976	NA

Source: Researcher’s Computation (2023)

Variance inflation factor (VIF) detects multicollinearity in regression analysis. It is a rule of thumb that if the VIF factor falls within the 1 and 5, this means the variables are moderately correlated, hence free from the problem of multicollinearity. From Table 4

above, the VIF values of all the variables fall within the 1-5 region, showed that that the variables in the model are free from the problem of multicollinearity.

Test for Auto-Correlation

Table 5. Auto-Correlation

Date: 08/15/23 Time: 01:30						
Sample: 2012 2022						
Included observations: 10						
Autocorrelation	Partial Correlation		AC	PAC	Q-Stat	Prob*
. ** .	. ** .	1	0.225	0.225	0.6732	0.412
. * .	. * .	2	-0.123	-0.183	0.9012	0.637

.*** .	.*** .	3	-0.408	-0.364	3.7531	0.289
.*** .	.*** .	4	-0.435	-0.355	7.5447	0.110
. .	. .	5	-0.044	-0.026	7.5918	0.180
.* .	.* .	6	0.163	-0.068	8.3901	0.211
.* .	.** .	7	0.146	-0.207	9.2383	0.236
. .	.** .	8	-0.023	-0.286	9.2695	0.320
. .	. .	9	0.000	-0.009	9.2695	0.413
*Probabilities may not be valid for this equation specification.						

Source: Researcher's Computation (2023)

This test is carried out to further test for auto correlation. The result of Correlogram Q-Statistic in Table 5 suggests that the variables are free from auto correlation.

The correlogram Q- Stat. table indicates that all p-values were >5% hence the conclusion that the model was free from auto correlation.

Hypotheses Testing

The researcher tested six hypotheses which were earlier stated in null form. The purpose of

this section is to draw inferences following the results obtained from data analysis and hypotheses testing.

Decision Rule: The researcher used critical values like p-value as the basis for acceptance and rejecting of null hypotheses. Where the critical p-value computed is less than 5% significance level, the variable was taken as being significant, hence it was rejected.

Table 6. Test of Hypothesis One

H0₁: There is no significant influence of life insurance funds on human development index in Nigeria

Variables	Coefficient	t-Statistic	P-value
LIF	3.98	5.899	0.0011

Source: Researcher's Computation (2023)

The test of hypothesis (H0₁) revealed that the p-value of LIF is less than 0.05 significance level, with a probability value of 0.0011. The researcher therefore rejects the null hypothesis.

This result shows that life insurance fund has significant influence on human development index in Nigeria.

Table 7. Test of hypothesis two

H0₂: Pension funds has no significant influence on human development index in Nigeria.

Variables	Coefficient	t-Statistic	P-value
PEF	4.44	2.749	0.0333

Source: Researcher's Computation (2023)

The test of hypothesis (H0₂) revealed that the p-value of PEF is less than 0.05 significance

level, with a probability value of 0.0333. The researcher therefore rejects the null hypothesis.

This result indicates that pension funds have significant influence on human development index in Nigeria.

Table 8. Test of Hypothesis Three

H0₃: There is no significant influence of deposit administration fund on human development index in Nigeria

Variables	Coefficient	t-Statistic	P-value
DAF	-9.52	-2.807	0.0309

Source: Researcher’s Computation (2023)

The test of hypothesis (H0₃) revealed that the p-value of DAF is less than 0.05 significance level, with a probability value of 0.0309. The null hypothesis which states that there is no significant influence of deposit administration fund on human development index in Nigeria is rejected.

Discussion of Findings

A keen observation of the result showed that the R-squared and Adjusted R-squared was approximately 0.91 and 0.86 respectively. This means that the explanatory variables accounted for about 91% variations in the explained variable. Put differently, about 91% variation in Human Development Index was explained by the independent variables, while the remaining 8% may be attributed to variables not captured in the model (stochastic variables). The findings are summarized below:

1. Life insurance funds had a significant and positive effect on human development index in Nigeria. This finding is in agreement with the study of [29]. This positive effect could be attributed to the fact that life insurance funds contribute to the wellbeing of the citizens and could also provide funds for the populace to enjoy the necessary physiological needs of an average Nigerian which are the components of human development index in Nigeria.
2. From the findings, pension fund also recorded a significant positive effect on human development index in Nigeria. The same explanation for this positive effect can be deduced from that of life insurance

funds in i above. In the same vein, this finding is also in consonance with the study of [27].

3. Lastly, deposit administration fund recorded a significant negative effect on human development index in Nigeria.

Conclusion

This study investigated the effect of insurance funds on human development index in Nigeria. The study used life insurance funds, pension funds and deposit administration funds as independent variables, to test their effect on the dependent variable being human development index. The results of Fully Modified Ordinary Least Squares revealed that life insurance fund and pension fund had significant positive effect on human development index in Nigeria, while deposit administration fund had a significant negative effect on human development index in Nigeria. National insurance commission (NAICOM) should ensure that the insurance industry is stable robust in discharging its functions in the Nigerian economy through adequate regulations and reforms which will lead to the stability of this sector and by extension tantamount to the improvement in the standard of living of the populace which is a measure of human development index. From the foregoing, this study concludes that insurance funds had significant effect on human development index in Nigeria within the period of review.

Recommendations

Based on the results discussed in the foregoing paragraphs, government, National

insurance commission and policymakers in Nigeria should consider the following recommendations to increase and improve human development index into Nigeria.

1. Since life insurance funds had a significant positive effect of human development index in Nigeria, efficient policies on the amount of premium to be paid on life insurance contract should be enacted by National Insurance Commission, as higher premium discourages potential insurance investors from efficiently participating in the industry.
2. In the same vein, pension funds had a significant positive effect on human development index in Nigeria, the National Insurance Commission, in conjunction with the government should efficiently work together to ensure that the premium collected, and the income generated by the industry through pension funds, are diversified into economic and productive investment, in order to boost human development in Nigeria.

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3. From the results, deposit administration had a negative effect on human development index in Nigeria, the National Insurance Commission (NAICOM), in collaboration with the Federal Government should formulate and enforce laws on insurance practice in Nigeria such that deposit administration fees charged are moderate and affordable so as not to discourage potential policy buyers from shying away from investing in the insurance industry in Nigeria.

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Conflict of Interest

The author reports that there is no conflict of interest whatsoever in this research paper.

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