The Nigerian society and Total Assets of Life Insurance Companies: 2002 - 2017

IZEKOR, Andrew Osaretin

Department of Banking and Finance,
Faculty of Management Sciences,
University of Benin
Benin City, Edo State, Nigeria.
E-mail: andrew.izekor@uniben.edu.

Phone: +2348089910338

&

EZEABASILI, Vincent N.
Department of Banking and Finance,
Faculty of Management Sciences,
Chukwuemeka Odumegwu Ojukwu University
Igbariam, Nigeria
vincentezeabasili@gmail.com.
+2348034236705

Corresponding Author: IZEKOR, Andrew Osaretin
andrew.izekor@uniben.edu.

Abstract
This study empirically tests for long-run and short-run connection between level of income, level of savings and total assets of life insurance companies in Nigeria. The data for the study were culled from CBN statistical bulletin and NAICOM data base. The ex-post facto research design was applied using the time series econometric techniques, to execute the diagnostic tests and inferential analyses of the data. Consequent upon the data analyses, the study revealed positively significant long-run and short-run relationship between the level of income and the total assets of life insurance companies in Nigeria; while the level of savings have negative and insignificant long-run and short-run relationship with the total assets of life insurance companies in Nigeria. The recommendation of the study among others, advise that the Nigerian government should aspire to diversify the economy, to open more areas for income generation for individuals in the society in order to boost insurance activities.

Keywords: Inconsequential, level of income, level of savings, life insurance and total assets

Introduction

The idea of modern form of insurance was ushered into Nigeria at the latter part of the 19th century by the Colonial masters through the establishment of several trade posts, using the European trading companies. Subsequently, some Nigerians were appointed as agents by the British Insurers who were the Colonial masters, to represent their interest in view to buildup assets in Nigeria. The British Insurers as at the time of Independence continued to dominate in the acquisition of insurance assets in Nigeria, by means of owning and controlling twenty one companies out of the twenty five insurance companies (Eze & Okoye, 2013). Long after Independence, the Insurance Act of 2003 established the recapitalization of insurance companies in Nigeria, which resulted to a minimum capital level of ₦2billion for Life insurance. The insurance recapitalization exercise brought about mergers and acquisitions, which led to the number of insurance corporations to experience a reduction from 104 to 49 (Ukpong & Acha, 2017). Insurance corporations are non-banking institutions, which are solely classified as life assurance and non-life insurance policies that play vital roles amongst financial intermediaries within the financial system. Insurance corporations are involved in capital formation, risk management and as such provide protection for individuals (life insurance), properties and business risks that may suddenly occur within a country. Insurance corporation is one of the largest financial investors in stocks, real estate and bonds markets, consequently with fast growing assets, which would comparatively be on the increase due to widening income and globalization (Iyodo, Samuel & Inyada, 2018; Akpan & Acha, 2011; Oke, 2012).

Previous literature as considered by this study on life insurance, which include Haiss and Sumegi (2008), Han et al. (2010), Chen, Lee and Lee (2011), Oke (2012), Lee, Lee and Chiu (2013), Chau, Khin and Teng (2013), Madukwe and Anyanwaokoro (2014), Ukpong and Acha (2017), Egoro and Andabai (2017) and Fashagba (2018) narrowly focused on the contributions of life insurance corporations to economic growth. In view of the considered literature, it was obvious that none of these studies examined the factors that led to the growth in total assets of life insurance corporations, which forms part of the contributions to economic growth. Consequently, this study seeks to empirically examine the short and long term equilibrium connection between the level of income, level of savings and total assets of life insurance corporations in Nigeria till the year 2017. As a consequence, research for this study stopped at 2017 due to no availability of further records of data beyond the year 2017. This study hypothesized on no short and long term

equilibrium connection between level of income, level of savings and total assets of life insurance corporations in Nigeria.

Literature Review

Life Insurance as a Concept

The insurance sector enhances economic growth through the mobilization of investment funds and savings, accrued from payment from premiums and underwriting profits, through which insurance funds are invested in the capital market and other financial institutions (Oke, 2012; Olayungbo, 2015). Obasi (2010) viewed insurance as a contract between two parties, which is the person who obtains the policy (insured) and the insurance corporation who sells the policy (insurer). The insurer accepts to recompense the insured or their relatives a fixed amount of money in the event of an ill-fated loss, consequent upon the initial payment of premiums. Ukpong and Acha (2017) referred to insurance as the collection of funds by the insurer from the insured in form of premiums. Premiums aid investments, which increases the insurance total assets, for the subsequent settlement of claims when there is a sudden loss by the insured. The collection of premiums from the insured, enable the insurers to pull together enormous sum of money for both short and long term investment, which result to the growth in total assets of the insurance company. Consequently, long term insurance investment in the economy is very crucial for economic growth, as well as the internal financial deepening of the insurance corporations (Acha & Ukpong, 2012; Obasi, 2010; Augustine & Nwanneka, 2011).

The activities of life insurance have been observed as one of the major factors propelling economic growth and development in both developed and developing nations (Soon, 1996; Ward & Zurbruegg, 2000). Consequently, life insurance company is a vehicle, which acts as a channel for mobilizing savings in order to achieve long term investment purposes, resulting to growth and development in an economy (Ibiwoye, Ideji & Oke, 2010). Chukwulozie (2006) argued that the lack of societal savings for the demand of life insurance policy has been due to low level of income, high inflation rate, low level of education, lack of insurance awareness, lack of reliable actuarial data for research, as well as the weak financial market. Life insurance is an aspect of insurance activities, which plays fundamental role in the society through the provision of financial security to the insured upon unexpected events such as death, disability and accidents, as well as to creates employment opportunities (Arena, 2008; Razak et al., 2014). Ibiwoye, Ideji

and Oke (2010) opined that life insurance companies are regarded as financial intermediaries, whose primary aim is to create links between the surplus units (insured) and the deficit units (insurers) in the financial system.

Consequent upon as a financial intermediation, life insurance policy has turned out to be a major source for long term finances, resulting to a push in capital markets development. Ibiwoye, Ideji and Oke (2010) considered life insurance policy as a luxury good, which only the large income earners can afford. Taking a life insurance policy entails the demand for insurance products, such as whole life insurance policy, endowment policy and term policy, as well as annuity. Consequent upon the forgoing, life insurance companies are obligated to protect the financial interest of the insured, such that the insurer is indebted to cover the funeral expenses (usually remitted to the insured next of kin) of the insured in the event of a sudden death within the contract period. Life insurance contract is a legal accord, which stipulates the requirements and circumstances of the presumed risk (Hofmann, 2009; George, 2003). Nurul and Sarah (2013) opined that the payment of accrued claims for life insurance policies are usually paid in lump sum or on monthly installment at the confirmation of the death of the insured. Ibiwoye, Ideji and Oke (2010) stated that the settlement of claims for the insured could be difficult when a country lacks political stability with corrupt legal institutional framework, can reduce societal motivation towards the demand for life insurance policies.

Theoretical Review

This study is anchored on the Expected Utility Theory, which was propounded by John Von Neumann and Oskar Morgenstern (1953), as a surmise of decision making process during a risk taking situation, such that people take different choices in the same situation of risk, whether or not to take a life insurance policy. The theory stipulates that, individuals make decisions in a situation of uncertainty, which is basically on the outcomes of utility and relevant chances. In this theory, the choice of event or plan is taken by a person to ensures maximum satisfaction, which is the utility of the individual's preference. An individual's preference to take life insurance contract relates to its level of income and savings, which would consequently have effect on the assets of life insurance corporations in Nigeria (Yaari, 1965; Mossin, 1968; Hakansson, 1969).

Empirical Review

Empirical studies on total assets of life insurance and its relationship with societal income and savings are extremely limited as most of the studies focused on the economic growth direction. Haiss and Sumegi (2008) examined the relationship between insurance corporations and the growth in some European economy for the period of the years 1992 to 2005 analyses were based on a cross country panel data for 29 countries in Europe. Haiss and Sumegi (2008) findings had positive significance with an inconsequential contribution of life insurance to growth in GDP for 15 countries in Europe; while general insurance has a larger contribution to growth in GDP in the economy of East and Central Europe. Ukpong and Acha (2017) considered the co-integrating relationship and causality effect between insurance corporations and economic development in Nigeria for the period of the years 1990 to 2013, using GDP as proxy for economic development; while total investment in insurance, total premiums for life insurance and total premiums for non-life insurance were considered for growth measurement in insurance activity. Ukpong and Acha (2017) regression analyses were based on the application of the stationarity test, co-integration test, regression analysis and granger causality tests. The test results showed co-integration among the variables, and GDP has a causality effect on total premiums for non-life insurance activities, and vice versa; while a unidirectional causation subsisted between GDP and total premiums for life insurance and there was no causality, linking GDP to total investments in insurance activities. Ukpong and Acha (2017) conclusion was that, insurance enhances economic development in long run equilibrium relationship. Han et al. (2010) considered the subsisting links between life insurance, general insurance and growth in the economy of 77 countries for which the analyses were based on the generalized moments method and dynamic panel data estimation factor. The results portrayed that life insurance business had lesser influence on economic growth compared to general insurance business.

Chen, Lee and Lee (2011) used the generalized moments method as the regression technique for data analyses to examine the correlation between life insurance market development, stock market operations and growth in the economy for 60 countries for the period of the years 1976 to 2005, for which the test results proved that insurance business influences economic growth. Lee, Lee and Chiu (2013) examined the long and short term connection between premiums paid in life insurance and real GDP in 41 countries for the period of the years 1979 to 2007. Adopting the co-integration technique, a long run equilibrium link was established with premiums paid in

life insurance to per capita income in real GDP. Consequently, the projected long-term results of premiums to life insurance have positive contributions to economic growth. The results also showed at both short and long term that premiums to life insurance has a causality effect on economic growth, and vice versa. Ibiwoye, Ideji and Oke (2010**)** evaluated the determinant of the consumption of life insurance policy in Nigeria for the period of the years 1970 to 2005, using error correction framework and co-integration technique. It was observed from the results that, RGDP and SAP had positive significant influence on the consumption of life insurance; Indigenization programme and local rate of interest were significant, with negative influence on the consumption of life insurance policy. The results also indicate that rate of inflation, investment returns, economic openness and political unsteadiness had no influence on life insurance consumption. Chau, Khin and Teng (2013) considered the bond between life insurance, general insurance demand and growth in the Malaysia economy for the period of the years 1970 to 2012. The variables adopted using the unit root test, co-integration test, error correction method and the granger causality test were capital stock, total employment, premiums paid in life insurance and premiums paid in general insurance as well as GDP. The test results revealed that total employment and life insurance premium had positive significant correlation with economic growth at the short run; while capital stock and general insurance positively and significantly in the long run correlate with growth in the economy.

Oke (2012) was of the opinion that insurance sector development, significantly and positively correlate with the growth in the Nigeria economy for the period of the years 1985 to 2009. The Johansen co-integration test and the parsimonious error correction model were adopted, using variables such as GDP, number of insurance corporations, premiums paid in life insurance, premiums paid to non-life insurance, total investment in insurance and rate of inflation. Madukwe and Anyanwaokoro (2014) did a study on the connection between business activities in life insurance and growth in the Nigeria economy for the period of the years 2000 to 2011. The result showed significant connection between life insurance premium and GDP; Madukwe and Anyanwaokoro (2014) test results further showed low rate of consumption in the Nigeria life insurance corporations, when the Pearson's Product Movement (PPP) correlation technique was adopted. The connection between insurance company and growth in the Nigeria economy was as well considered by Fashagba (2018) for the period of the years 2007 - 2016. The results of the ordinary least square portrayed that premium paid in life insurance was negative and

insignificant to economic growth. Olayungbo (2015) looked at the effects of life and non-life insurance on growth in Nigeria economy for the period of the years 1976 to 2013. The autoregressive distributed lags was adopted to estimate a growth model. The results revealed short and long run positive and significant effects among the variables, which affirms that life and non-life insurance contribute to the growth of the Nigeria economy. Arena (2008) test for the causality outcome of insurance market activities and growth in the economy of 55 countries between the years 1976 to 2004. The test results of the generalized moments method revealed positive and significant causality outcomes between insurance activities (life and non-life) and growth in the considered economies. Anju and Renu (2013) considered the link between life insurance and growth in the economy of India. The variables used were premium paid on total life insurance, investment on total life insurance and GDP for selected period of the years 1990 to 1991 and the years 2010 to 2011 respectively. Anju and Renu (2013) findings portrayed that life insurance significantly influenced growth in India economy, using the Breusch-Godfrey Lagrange multiplier test for serial correlation, Heteroskedasticity: Breusch-Pagan-Godfey, Jarque-Bera, Collinearity Diagnoses tests to ascertain the sturdiness of ordinary least square regression model.

In addition, Egoro and Andabai (2017) examined the development of life assurance business and growth in the Nigeria economy between the years 1990 and 2015. The econometrics techniques implemented were the augmented Dickey–Fuller unit root test, co-integration test, vector error correction model and the granger causality test. The results disclosed no unit root problems with the observation of a long-run equilibrium connection between the development of life assurance business and growth in the Nigeria economy, as well as no causality was observed between the development of life assurance business and growth in Nigeria economy. Ouedraogo, Guerineau and Sawadogo (2018) studied the correlation and the heterogeneous effect of life insurance sector development and growth in the economy of 86 developing nations for the period of the years 1996 to 2011. The econometric results illustrated a positive effect of life insurance development on the growth of the 86 developing economies, which varies in accordance with the structural characteristics of the various countries. Besides, the interest rate deposit, bank credit and the value trade in stock market positively decreased the marginal impact in the development of life insurance. The effect was greater in countries with high quality institutions, whose effects were minimal for SSA and countries with British lawful systems, when related to non-SSA and

countries with non-British lawful systems. Nguyen, Avram and Skully (2010) examined the link between the entire growth in insurance (life and non-life) and growth in the economies of 93 nations for the period of the years 1980 to 2006. Nguyen, Avram and Skully analyses were based on the ordinary least square and the generalized moments method estimations on cross-sectional panel data procedures. The results portrayed that the entire growth in insurance, including consumption rate of real premium per capita, positively and significantly influenced growth in the economies of the 93 considered countries.

Methodology of Research

The *ex post facto* research design using the multiple regression technique was adopted in this study through the use of E-views to perform the diagnostic and inferential tests analyses. The tests performed were the descriptive statistics, the augmented Dickey-Fuller unit root, the Johansen co-integration, the error correction mechanism and the ordinary least square method**.** The descriptive statistics explain the basic features of the data test for normality of the data; The augmented Dickey Fuller unit root, test for stationarity of the variables; The Johansen co-integration, test for long run equilibrium correlation; and the error correction mechanism is a test, which examined short run relationship**.** Data were obtained from the Nigeria statistical bulletin of Central Bank and NAICOM data base covering a period of 16 years: 2002 – 2017. This study considered the year 2002 as its base, which was the year before the recapitalisation exercise which commences significant change in the insurance industry. This period of 16 years in the history of the Nigerian insurance industry noticed significant changes in the total assets in life insurance company. During this period, the insurance industry witnessed series of reforms in an attempt to improve the financial status and develop the Nigerian society. Research for this study stopped at 2017 because, there were no further record of data beyond 2017. The hypotheses were tested at 1% and 5% levels of significance using p-value statistic for making decision.

Model Specification

This study followed the model of Adetunji, Nwude and Udeh (2018), which applied the multiple regression technique as specified thus; $GDP = \beta_0 + \beta_1 GIP_{jt} + \beta_2 LIP_{jt} + \beta_3 TII_{jt} + \beta_4 NIC_{jt} + U_t$. Our study is specified as:

$TASSLINS_t = F(INCOMLEV, SAVERATE)_t$ ……. 1

The variables were transformed into logarithm to eliminate any form of abnormalities in the data generated. Log transformation is necessary to minimize heteroskedasticity problem, which compresses the scale for which the variables are measured, thereby condensing a ten times difference between two values to twofold difference (Gujarati, 2003).

The econometric model specified in the log linear form is shown in equation 2 as:

$$LTASSLINS_t = \beta_0 + \beta_1 LINCOMLEV_t + \beta_2 LSAVERATE_t + \cup_t \ldots\ldots\ldots\ldots\ldots\ldots\ldots\ldots\ldots\ldots\ldots\ldots 2$$

Where:

β_0= constant coefficient

β_1 and β_2= Coefficients of the independent variables.

$LTASSLINS_t$ = log of total assets of life insurance company in Nigeria

$LINCOMLEV_t$ = log of the level of individual income in Nigeria

$LSAVERATE_t$ = log of the level of individual savings in Nigeria

$\cup_t$= error term with a zero mean showing the adjustment on $LTASSLINS_t$.

The *a-priori* anticipation: $\beta_1 > 0$ and $\beta_2 < 0$.

Presentation of Data

Table 1: Data for Total Assets of Life Insurance company, Level of Income and Level of Savings

Year	TASSLINS ($'Billion)	INCOMLEV (%)	SAVERATE ($'million)
2002	33322.0	4.15	21927.62
2003	49881.0	4.11	36807.67
2004	63491.9	4.19	41431.15
2005	72710.6	3.83	50348.27
2006	88455.9	3.14	51858.72
2007	125234.3	3.55	105379.28
2008	187138.1	2.84	157206.02
2009	198108.9	2.68	189960.45
2010	193274.2	2.21	200375.98
2011	209533.8	1.41	233752.88
2012	212827.8	1.71	267129.78
2013	267601.9	2.17	300506.68
2014	127231.6	3.38	333883.58
2015	269748.0	3.51	367260.48

2016	313906.6	4.18	400637.38
2017	419116.3	4.86	434014.28

Source: CBN Statistical Bulletin (2018) and NAICOM Data Base (2018)

Analyses of Empirical Results

Table 2: Descriptive Statistics

	TASSLINS	INCOMLEV	SAVERATE
Mean	176973.9	199530.0	3.245000
Median	190206.2	195168.2	3.445000
Maximum	419116.3	434014.3	4.860000
Minimum	33322.00	21927.62	1.410000
Std. Dev.	106736.3	140327.0	0.997029
Skewness	0.556941	0.205190	-0.339221
Kurtosis	2.728166	1.701082	2.103335
Jarque-Bera	0.876418	1.237066	0.842861
Probability	0.645191	0.538734	0.656108
Sum	2831583.	3192480.	51.92000
Sum Sq. Dev.	1.71E+11	2.95E+11	14.91100
Observations	16	16	16

Source: Researchers' computation (2020), using E-view 7.0

The results in Table 2 showed the p-values of 0.645191, 0.538734, 0.656108 (P > 0.05), which are not significant at 5% level for Lincomlev, Lsaverate and Ltasslins respectively, with corresponding Jarque-Bera statistic of 0.876418, 1.237066 and 0.842861 respectively. Consequently, the results for the p-values of the Jarque-Bera statistic established that there is normality in the data distribution.

Table 3: Stationarity Test Result Using ADF Unit Root Test

Variables	At Level	Prob.	At First Difference	Prob.	Order of Integration	Remark
LTASSLINS	-1.602739	0.4569	-5.219752	0.0012**	I(1)	stationary
LINCOMLEV	-2.334339	0.1747	-3.475801	0.0258*	I(1)	stationary
LSAVERATE	-0.993664	0.7268	-2.657824	0.0119*	I(1)	stationary

***denotes 1% level of significance. *denotes 5% level of significance*

Source: Researchers' computation (2020), using E-views7.0

In Table 3, the variables showed order of integration at order one, I(1). The stationarity of the

variables were at first difference with p-values of less than 0.05, which indicates that there is no unit root problem at 5% and 1% levels. Furthermore, the test for long-run relationship carried out using the Johansen co-integration test and the result shown in Table 4.

Table 4: Johansen Co-integration Test Results for Lincomlev, Lsaverate and Ltasslins

Hypothesized No. of CE(s)	Eigenvalue	Trace /Max-Eigen Statistics	0.05 Critical Value	Prob.
None *	0.338368	5.782651	3.841466	0.0162*

Trace test and Max-eigenvalue test indicate 1 cointegrating eqn(s) at the 0.05 level

Source: Researchers' computation (2020), using E-views 7.0

Table 4 shows co-integration between Lincomlev, Lsaverate and Ltasslins, which seems indicate that there is long-run equilibrium connection among the variables, such that the Trace and Max-Eigen statistic test indicate one co-integrating equation, with p-values less than 5%.

Table 5: Result for Error Correction Model (ECM)

Sample (adjusted): 2003 2017

Variable	Coefficient	Std. Error	t-Statistic	Prob.
C	0.017983	0.087302	0.205982	0.8406

DLINCOMLEV	0.689334	0.319714	2.156095	0.0541
DLSAVERATE	-0.525048	0.270370	-1.941964	0.0782
ECM(-1)	-0.959163	0.282046	-3.400729	0.0059

R-squared	0.606474	Mean dependent var	0.168795
Adjusted R-squared	0.499149	S.D. dependent var	0.318446
S.E. of regression	0.225367	Akaike info criterion	0.081005
Sum squared resid	0.558693	Schwarz criterion	0.269819
Log likelihood	3.392460	Hannan-Quinn criter.	0.078994
F-statistic	5.650800	Durbin-Watson stat	1.834942
Prob(F-statistic)	0.013636		

Source: Researchers' computation (2020), using E-views 7.0

The ECM results in Table 5, meet the required criteria with a coefficient of less than -1 and a significant p-value of less than 5%. The coefficient of -0.959163 implies that the contemporaneous adjustment to long run equilibrium after a temporary disequilibrium is about 95%, which indicates that a short-run disequilibrium procedure can be quickly adjusted to a long-run equilibrium. Consequently, there is short run equilibrium relationship between Lincomlev, Lsaverate and Ltasslins.

Table 6: Ordinary Least Square (OLS) Result

Variable	Coefficient	Std. Error	t-Statistic	Prob.
C	3.688489	0.901952	4.089452	0.0013
LINCOMLEV	0.693480	0.067982	10.20092	0.0000
LSAVERATE	-0.027818	0.188192	-0.147818	0.8848

R-squared	0.901446	Mean dependent var	11.87503
Adjusted R-squared	0.886283	S.D. dependent var	0.718923
S.E. of regression	0.242434	Akaike info criterion	0.171190
Sum squared resid	0.764068	Schwarz criterion	0.316050
Log likelihood	1.630482	Hannan-Quinn criter.	0.178608
F-statistic	59.45338	Durbin-Watson stat	1.720250
Prob(F-statistic)	0.000000		

Source: Researchers' computation (2020), using E-views 7.0

The ordinary least square regression results in Table 6 can be confidently relied upon for

analyses. This is due to the absence of autocorrelation with Durbin Watson statistic of 1.720250, which is approximately equal to 2. The dependent variable showed high systematic fluctuation, given that R-squared and adjusted R-squared are 90% and 88% respectively, which explained the variations in our explanatory variable, with high explanatory power. Lincomlev is significant at 5% level due to the positive coefficient of 0.693480 and positive t-statistic of 10.20092 with a p-value of 0.0000 < 0.05. While Lsaverate is not significant at 5% level due to the negative coefficient of - 0.027818 and negative t-statistic of - 0.147818 with a p-value of 0.8848 > 0.05. These are in conformity to our *a-priori* anticipation, in which the positive coefficient and significant p-value of Lincomlev indicates positive and significant relationship with Ltasslins; while the negative coefficient and insignificant p-value of Lsaverate indicates negative and insignificant relationship with Ltasslins.

Test of Hypotheses

The hypotheses of this study showed there is no positive significant relationship between the level of income and total assets of life insurance companies in Nigeria; and there is no positive significant relationship between the level of savings and total assets of life insurance companies in Nigeria.

Table 7: Summary result of the hypotheses

Variables	Coefficients	Std-Error	t- statistic	Prob.	Remarks
LINCOMLEV	0.693480	0.067982	10.20092	0.0000	Reject H_0
LSAVERATE	-0.027818	0.188192	-0.147818	0.8848	Accept H_0

Source: Extracted from Table 6

The level of income has positive and significant relationship with total assets of life insurance companies in Nigeria; while the level of savings have negative and insignificant relationship with the total assets of life insurance corporations in Nigeria.

Findings and Discussion

The study examines the short and long run relationship among the level of societal income, level of savings and total assets of life insurance companies in Nigeria. Empirical analyses were performed to ascertain the influence of societal level of income and savings on total assets of life insurance companies in Nigeria from the years 2002 to 2017. The findings portrayed positive and significant relationship between the level of societal income and total assets of life insurance companies in Nigeria. There are long-run and short-run equilibrium connection between the

variables, which implies that, the substantial increase in the level of societal earnings would amount to increase in the numbers of those who take life insurance policy in Nigeria, which would consequently increase the total assets of life insurance companies. The long and short run equilibrium connection between the variables conform with the anticipated utility theory, which stipulates that, an individual's preference to take life insurance contract would relates to its level of income, which would consequently have positive changes on the assets of life insurance companies (Yaari, 1965; Mossin, 1968; Hakansson, 1969). The long run and short run equilibrium results conform with our *a-priori* anticipation and agree with the studies of Olayungbo (2015); Ibiwoye, Ideji and Oke (2010); Okonkwo and Okeke (2019), that obtained positive and significant relationships in findings. However, the study does not conform to Mojekwu and Ibekwe (2015), whose findings revealed that the people living in low salary structure, lack of basic amenities, high cost of living and underdeveloped economy affect the operations of life insurance. The findings also revealed negative and insignificant relationship between the level of societal savings and total assets of life insurance companies in Nigeria. There are long run and short run relationship between the variables, but with short-run inconsequential effect, which implies that the reduction in the level of societal savings would adversely influence the numbers of those who take life insurance policy in Nigeria, which would insignificantly reduce the total assets of life insurance companies; while at the long run, there would be a consequential effect if the society continue to adopt the habit of less savings. The negative and insignificant relationship between the variables agree with the anticipated utility theory, which stipulates that, an individual's preference to take life insurance contract would relates to its level of savings, which would consequently have adverse changes on the assets of life insurance companies (Yaari, 1965; Mossin, 1968; Hakansson, 1969). The negative and insignificant long run and short run outcome conform to our *a-priori* anticipation and agrees with the studies of Mojekwu and Ibekwe (2015), whose findings revealed that people with low salary structure would reduce the number of those who demand for life insurance policy, which would consequently reduce the total assets of life insurance companies in Nigeria; while the study does not conform with Olayungbo (2015), whose work showed positive and significant relationships in their findings.

Conclusion and Recommendations

It is the conclusion of this study that substantial increase in the level of societal income would amount to increase in the number of those who take life insurance policy in Nigeria, which would consequently increase the total assets of life insurance companies. Besides, the reduction in the level of societal savings would adversely influence the numbers of those who take life insurance policy, which would consequently reduce the total assets of life insurance companies in Nigeria. Consequently, an individual's preference to take life insurance contract would depend on his level of income and savings, which would consequently have positive or adverse changes on the assets of life insurance companies in Nigeria.

Based on the conclusion, we recommend that:

i. The Nigeria government as a matter of priority should aspire to diversify the economy, in order to create more areas for income generation by the society to motivate savings by individuals, so as to boost the activities of taking life insurance policies.

ii. The validation of claim payments for families of a life insurance takers in the event of a sudden death, should be made easier and faster to access, in order to motivate members of the society to engage in life insurance policies.

References

Acha, I., & Ukpong, S. M. (2012). Micro-insurance: A veritable product diversification option for micro-finance institutions in Nigeria. *Research Journal of Finance and Accounting,3(*8), 78 - 85.

Adetunji, A. L., Nwude, E. C., & Udeh, S. N. (2018). Interface of insurance and economic growth: Nigerian experience. *International Journal of Economics and Financial Issues, 8*(4), 16 - 26.

Akpan, I., & Acha, I. A. (2011). *Principles of insurance and risk management* (2nd ed.). SOWA Sp. z. o. o.

Anju, V., & Renu, B. (2013). The relationship between life insurance and economic growth: Evidence from India. *Global Journal of Management and Business Studies, 3*(4), 413 - 422.

Arena, M. (2008). Does insurance market activity promote economic growth? A cross country study for industrialized and developing countries. *Journal of Risk and Insurance, 75*(4), 921 - 946.

Augustine, U., & Nwanneka, J. (2011). Repositioning insurance industry for operational efficiency: The Nigerian case. *Journal of Applied Finance & Banking,1*(3) 15 - 32.

Chau, W. H., Khin, A. A., & Teng, K. L. (2013). Economic development contribution and Malaysian life and general insurance funds consumption. *Australian Journal of Basic and Applied Science, 7*(10), 538 - 546.

Chen, P. F., Lee, C. C., & Lee, C. F. (2011). How does the development of the life insurance market affect economic growth? Some international evidence. *Journal of International Development, 24*(7), 865 - 893.

Chukwulozie, O. E. (2006). Life insurance as a source of long time savings in Nigeria: Regulator's perspective. *CBN publication*, *30*(1), 20 - 31.

Egoro, S. A., & Andabai, P. W. (2017). Life assurance business development and economic growth in Nigeria (1990 - 2015). *Journal of Finance, Banking and Investment, 4*(1), 238 - 246.

Eze, R., & Okoye, V. (2013). Analysis of insurance practices and economic growth in Nigeria: Using co-integration test and error correction model. *Global Advanced Research Journals 2*(1), 63 - 70.

Fashagba, M. O. (2018). The impact of insurance on economic growth in Nigeria. *Afro Asian Journal of Social Sciences, 9* (1), 1-10.

George, E. R. (2003). *Principle of Risk Management & Insurance*. Harier Collins Publishers.
Gujaraiti, D. N. (2003). *Basic Econometrics* (3rd ed). McGraw-Hill.

Haise, P., & Sümegi, K. (2008). The relationship between insurance and economic growth in Europe. A theoretical and empirical analysis. *Empirical Journal, 35*(4), 405 - 431.

Hakansson, N. H. (1969). Optimal investment and consumption strategies under risk, and under uncertain lifetime and insurance. *International Economic Review*. *10* (4), 43 - 66.

Han, L. Y., Li, D. H., Moshirian, F., & Tian, Y. H. (2010). Insurance development and economic growth in Nigeria. *Geneva Papers on Risk and Insurance, 35*(1), 183 - 199.

Hofmann, A. (2009). *Imperfect insurance markets: An economic analysis of externalities and consumer diversity.* VerlagVersicherungswirtschaft Publisher.

Ibiwoye, A., Ideji, J. O., & Oke, B. O. (2010). The determinants of life insurance consumption in Nigeria: A co-intergration approach. *International Journal of Academic Research*, *2*(4), 351 - 358.

Iyodo, B. Y., Samuel, S. E., & Inyada, S. J. (2018). Effect of insurance industry performance on economic growth in Nigeria. *International Journal of Business and Finance Management Research.* 6, 22 - 33.

Lee, Chien-Chiang., Lee, Chi-Chuan., & Chiu, Yi-Bin. (2013). The link between life insurance activities and economic growth: Some new evidences. *Journal of International Money and Finance, 32,* 405 - 427.

Madukwe, O. D., & Anyanwaokoro, M. (2014). The causal relationship between life insurance business and economic growth in Nigeria. *International Journal of Innovation and Scientific Research, 4*(2), 100 - 109.

Mossin, J. (1968). Aspects of rational insurance purchasing. *Journal of Political Economy*, *79*(4), 553 - 568.

Mojekwu, J. N., & Ibekwe, U. A. (2015). Socio-economic indicators affecting life insurance business in Nigeria. *Journal of Emerging Trends in Economics and Management Sciences, 6*(8), 340 - 344.

Neumann, V. J., & Morgenstern, O. (1953). Theory of Games and Economic Behavior. Princeton University Press.

Nguyen, Y. N., Avram, K., & Skully, M. T., (2010, August). Insurance and economic growth: A cross country examination. A conference organized by the Australian centre for financial studies - Finsia banking and finance, Australia. Available at: https://ssrn.com/ abstract= 1646757

Nurul, S. M., & Sarah, M. P. V. (2013). The determinants of life insurance demand: A focus on saving motives and financial literacy. *Journal of Asian Social Science, 9*(5), 274 - 284. https://dx.doi.org/10.5539/ass.v9n5p274

Obasi, M. (2010). Scale economics and performance evaluation of insurance markets in Nigeria. *Journal of the Social Sciences 4*(1) 11 - 29.

Oke, M. O. (2012). Insurance sector development and economic growth in Nigeria. *African Journal of Business Management, 6*(23), 7016 - 7023.

Okonkwo, I. V., & Okeke, D. C. (2019). Developments and innovations in Nigerian insurance industry: 2010-2018. *International Journal of Research in Business, Economics and Management, 3*(1), 105 - 121.

Olayungbo, D. O. (2015). Effects of life and non-life insurance on economic growth in Nigeria: An autoregressive distributed lag approach. *Global Journal of Management and Business Research, 15*(11), 32 - 40.

Ouedraogo, I., Guerineau, S., & Sawadogo, R. (2018). Life insurance development and economic growth: Evidence from developing countries. *Journal of Economic Development, 43*(2), 1 - 28.

Razak, D. I., Kasim, H. S., Ghazali, R., Paramasivam, S., & De-Mello, G. J. P. (2014). An overview of demand for life insurance in Malaysia. *International Journal of Humanities and Social Science 4*(4)*,* 330 - 342.

Soon, H. J. (1996). Life insurance and economic growth: Theoretical and empirical investigation. Ph.D Dissertation, Department of Economics. University of Nebraska.

Ukpong, M. S., & Acha, I. A. (2017). Insurance and economic development in Nigeria: Co-integration and causality analysis. *Scholedge International Journal of Management & Development, 4(*4), 28 - 39.

Ward, D., & Zurbruegg, R. (2000). Does insurance promote economic growth? Evidence from OECD countries. *Journal of Risk and Insurance, 67*(4), 489 - 506.

Yaari, M. E. (1965). Uncertain lifetime, life insurance, and the theory of the consumer. *Review of Economic Studies*, *32*(2), 137 - 150.