International Journal of Research in Finance and Marketing (IJRFM)
Available online at: http://euroasiapub.org
Vol. 8 Issue 4, April- 2018
ISSN(o): 2231-5985 | Impact Factor: 6.397 |

INSURANCE AND ECONOMIC GROWTH NEXUS IN NIGERIA, 1981-2016. BOUND TEST APPROACH

EZEMA, CLIFFORD ANENE
Department of Insurance and Risk Management, Faculty of Management Sciences, Enugu State University of Science and Technology, (ESUT), Enugu, Enugu State Nigeria

IBEABUCHI, HELEN
Department of Insurance, School of Financial Studies, Institute of Management and Technology, (IMT) Enugu, Enugu State Nigeria

Abstract:
The study want to examine the impact of insurance to Economic growth of Nigeria, 1981-2016 using a bound test of Auto regressive lag model as the method of estimation. The bound test of Auto regressive lag (ARDL) model cointegration procedures and Error Correction Model (ECM) were used The analyses of result of the ARDL regression showed evidence in favour of cointegration between insurance and Economic growth of Nigeria. Similarly, estimates from the error correction model provide evidence to show that insurance and Economic growth of Nigeria converge to a long-run equilibrium at a reasonably fast rate. The result points to the fact that the insurance if well managed can engineer the Nigerian economy to greater growth.
Keywords: Insurance; Economic Growth, Total insurance premium income, Total insurance investment Fund, Total insurance claims, Cointegration, Error Correction Model, ARDL.

I Introduction

Insurance is one of the cornerstones of modern-day services in the financial sector; it is a risk transfer mechanism that ensures full or partial financial compensation for the loss or damage caused by event(s) beyond the control of the insured party. Under an insurance contract, a party (the insurer) indemnifies the other party (the insured) against a specified event provided a financial consideration called premium is paid. Insurance however, provides protection only against tangible losses (Nwite, 2004). In addition to its traditional role of managing risk, insurance market activity, both as intermediary and as provider of risk transfer and indemnification, may promote growth by allowing different risks to be managed more efficiently, promoting long term savings and encouraging the accumulation of capital, serving as a medium of channeling funds from policy holders to investment opportunities, thereby mobilizing domestic savings into productive investment (Skipper, 1997; Arena, 1998).

The insurance industry is a highly specialized industry that gives greater security to the fortunes of common people and among the whole society. It is one of the financial institutions in Nigeria that aid economic development and growth. Egeria (1996) describes insurance as handmaid of commerce which plays a vital role in the going concern of humans as an economic unit. Chikeleze and Echekoba (2008), defined insurance as a contract whereby one party, called the insurer, in return for a consideration, called premium, undertakes to pay the

other party called the insured a sum of money or its equivalent in kind upon the happening of specified event that is contrary to the interest of the insured. Gollier (2003) argues that insurance involved the transfer of risk from an individual to a group, sharing losses on an equitable basis by all members of the group. Insurance is an indispensable aspect of a nation's financial system and theoretical conceptions explain that financial systems influence savings and investment decisions and hence long-run growth rates through the following functions; lowering the costs of researching potential investments; exerting corporate governance; trading, diversification, and management of risk; mobilization and pooling of savings; conducting exchanges of goods and services, and mitigating the negative consequences that random shocks can have on capital investment (Levine, 2004). Financial intermediaries support development through the improvement of these functions (i.e., the amelioration of market frictions such as the costs of acquiring information, making transactions, and enforcing contracts and allowing economies to more efficiently allocate resources (savings) across investments). However, the positive effects of financial development are tailored by the macro policies, laws, regulations, financial infrastructures and enforcement norms applied across countries and time. The level of growth and development which should be commensurate with Nigeria's huge potentials has not been attained and may never be attained since independence (Oluoma, 2010). Several factors have been advocated for this lack of growth of the Nigerian economy and among such notable factors is inadequate funding for investment purposes which have limited insurance penetration in the economy (oluoma, 2010)

The major role of an economy's financial sector is helping to channel resources from surplus unit to the deficit units for investment. Therefore, the financial sector improves the screening of fund seekers and the monitoring of the recipients of funds, thus improving resource allocation, mobilizes savings, lowers cost of capital via economies of scale and specialization, provides risk management and liquidity. Insurance companies could play a major role in these functions if properly managed thus, supporting economic growth. However, in Nigeria, based on the nation's experience of stunted growth; the insurance sector seems not actually contributed meaningfully in its role of effectiveness in the mobilization of funds for productive investment which could lead to growth. Risk transfer is the major functionality of the insurance on the client side. Usually the insured pays a premium and is secured against a specified uncertainty. By reducing uncertainty and volatility, insurance companies smoothen the economic cycle and reduce the impact of crisis situations on the micro and aggregate macro level. However, the demand for protection against loss of life and property caused by natural disaster, crime, violence, accidents, are not so demanded in Nigeria thus the purchase, possession and sale of goods, assets and services which are often facilitated by the indemnification of the insurance thereby enhancing growth. Therefore, the assured safety of life and property which enhances trade, transportation and capital lending and many sectors are not heavily reliant on insurance services. It is against the background of insufficient funding from major financial sectors of the economy that could drive Nigeria's economic wellbeing, alternative sources of funding becomes imperative that it is important for researchers and policymakers to attempt at examining the role of insurance in enhancing economic growth.

In carrying out this research, Bound test of the auto regressive distributed lag model will be used for the period of 1986-2016 to measure econometrically the contribution of insurance to economic growth of Nigeria. The remainder of the work will contain a review of related literature that contains theoretical and empirical review in the second section, the third section will present the methodology applied, the empirical result will occupy the forth section while the fifth will cover the conclusions.

II) REVIEW OF RELATED LITERATURE

Theoretical Review

Finance-Growth Nexus Theory: This study is based on the finance-growth nexus theory by Borrowing from financial services are important for economic growth as long as they improve productivity by promoting technological innovation and helping entrepreneurs with the best chances of success in the innovation process. He argued that mobilization of productive savings, efficient resources allocation, re-investment of mobilized financial resources into the economy would facilitate economic growth. He further stressed that these effects could create a favorable macroeconomic framework for strong economic growth. As a matter of fact, theoretical endogenous growth models which integrate financial development support this thesis. This theory is related to this study because for economic growth to subsist insurance industry must have mobilized the accumulated premium incomes and re-invests such funds into the economy, as well as prompt claims settlement to boost money supply and capital formation in the economy. Insurance firms are financial intermediaries that contribute significantly to economic growth of any economy

Empirical Review

Ward and Zurbruegg (2000) examine the potential causal relationship between economic growth and insurance market activity for nine OECD countries for the period 1961-1996, using annual real GDP as a measure of economic activity and annual real total written premiums as a measure of insurance activity using VAR. Result reveals a long-run relationship for five countries (Australia, Canada, France, Italy, and Japan). In order to assess causation between insurance and GDP growth for four countries (Australia, Canada, Italy, and Japan), Result reveals causation for three countries (Australia, Canada, and Japan).

Webb, et. al (2002) examine the causal relationship of banks, life, and non-life insurance activity on economic growth in some selected European countries using two ways least-squares method. Results reveal that the exogenous components of the banking and life insurance measures are found to be robustly predictive of increased economic growth.

Kugler and Ofoghi (2005) evaluate both a long-run relationship and Granger-causality between insurance size and economic growth for the United Kingdom using net premium for each insurance (general and long-term insurance) in the UK for the period 1966-2003. Using Johansen's co-integration test, Result reveals a long-run relationship between development in insurance market size and economic growth for all insurance components. Regarding causality tests, there is evidence of long-run causality from growth in insurance market size to GDP growth for eight out of nine insurance categories that are considered. Short–run causality exits from life, liability and pecuniary loss insurance. As the authors point out in

the paper, these results do not permit to make a definitive conclusion regarding causality.

Adams (2005) examine empirically the dynamic historical relation between banking, insurance and economic growth in Sweden from 1830 to 1998 using co-integration and Granger causality tests. Their results indicate that the development of banking, but not insurance preceded economic growth in Sweden during the nineteenth century, while Granger-causality was reverse in the twentieth century. The insurance market appears to be driven more by the pace of growth in the economy rather than leading economic development.

Outreville (1990) examined the relationship between property-liability insurance premium and economic and financial development with a cross-section of 55 developing countries. A positive relationship between logarithm of property-liability premium per capita and GDP per capital was found. It was argued that 1% increases in GDP causes more than 1% increase in demand. A positive relationship between insurance development (defined as insurance penetration or ratio of insurance premium to GDP) and financial development (ratio of M2 to GDP) was reported by using OLS method. He reported that the income elasticity was greater than one and a positive relationship between demand for insurance and financial development, but the coefficient for price was not statistically significant.

Haiss and Sumeji (2008) investigated both the impact of insurance investment and premiums on GDP growth in Europe and conducted a cross-country panel data analysis from 1992 to 2005 for 29 European countries. They found a positive impact of life insurance on GDP growth in 15 EU countries, among which were Switzerland, Norway and Iceland. For the New EU Member States from Central and Eastern Europe, they found a larger impact for liability insurance. Furthermore their findings emphasized the impact of the real interest rate and the level of economic development on the insurance-growth nexus. They argued that the insurance sector needed to be paid more attention to in financial sector analysis and macroeconomics policy.

Mojekwu (2011) examined the impact of insurance contributions on economic growth in Nigeria, 1981 and 2008 using dynamic factor model of correlation which described a number of methods designed to analyses a functional relationship between the volume of insurance contribution and economic growth in terms of underlying but unobservable random quantities called factors. The factor loadings indicated which common trend is related to which set of the series. The study found a functional positive relationship between the volume of insurance contributions and economic growth in Nigeria.

Pen-Fen et al. (2011) investigated the effect of life insurance on economic growth and what conditions affect the insurance-growth nexus. These conditions include the degree of financial development, private saving rates, interest rates, social security expenditures, income, young dependency ratio, life expectancy, and geographic regions. The main findings confirmed the positive impact of the development of the life insurance on economic growth. The insurance-growth nexus varied across countries with different conditions. For example, the positive impact on economic growth is less in the middle- income countries, but high in the low-income countries. Moreover, they found that the development of stock market and the life insurance market are substitutes rather than complements.

Marijuana (2009) empirically examined the relationship between insurance sector development and economic growth in 10 transition European Union. Three different

insurance variables were used; life, non-life and total insurance and other control variables like education, openness, inflation, investment, bank credit, stock capitalization. According to their findings, insurance sector development positively and significantly affects economic growth. The results are confirmed in terms of life and non-life insurance, as well as total insurance.

Arena (2008) worked on the empirical study and causal relationship between insurance activities and economic growth which include 56 countries (both developed and developing ones) in the period from 1976 to 2004. Insurance premiums are used as proxies of total life and non-life insurance activities separately. As an estimation method, the author used the generalized method of moment for dynamic models of panel data. The Result shows a positive and significant effect of total, life and non-life insurance market activity on economic growth. The author also examined the possibility of non-linear effect of life and non-life insurance variables on economic growth, but the results did not show the non-linearity in the relationship.

Wadlamannati (2008) examined the effects of insurance growth and reforms along with other relevant control variables on economic development in India in the period from 1980 to 2006. Growth of insurance penetration (life, non-life and total) is used as proxies of insurance sector growth. The author applied ordinary least square (OLS), co-integration analysis and error correction models (ECM). The study confirms positive contribution on insurance sector to economic development and a long-run equilibrium relationship between the variables. While the reforms in the insurance sector do not affect economic activity, their growth has positive impact on economic development.

Beenstock et al (1988) applied pooled time series and cross – sectional analysis on 1970 to 1981 data, covering mainly 12 countries. They employed multiple regression model to analyse the effect of premiums for property liability insurance (PLI) on gross national product (GNP), income and interest rate development, and found that premiums are correlated to interest rate and GNP; marginal propensity to insure (short and long run) rises with income per capita and is always higher in the long run.

Brown and Kim (1993) analyzed life insurance consumption per capita for 45 countries for the years 1980 to1987 with the multiple regression model on cross – sectional data on various countries figures, such as income or inflation rate; income dependency and social security expenses are positively correlated, while inflation is negatively correlated and significant in both years. The religious origin that is, being a Muslim country is always negatively connected to insurance consumption

Zhuo (1998) focused on China and conducted a cross – regional study for 1996 and a time – series analysis for the period 1986 to 1995. In accordance with other findings, both 42 the cross – regional and the time series analysis show that GDP per capita and consumer price index (CPI) are significantly correlated with insurance consumption.

Yinusa and Akinlo (2013) analyzed both the long and short run relationship between insurance development and economic growth in Nigeria over the period 1986 to 2010 Using error correction model (ECM), the study finds that insurance development co-integrated with economic growth in Nigeria. That is, there is long run relationship between insurance development and economic growth in Nigeria. The results also shows that physical capital

and interest rate both at contemporary and one lagged value has significant positive effect on economic growth in Nigeria while physical capital and inflation has negative long run relationship with economic growth. The results of this study generally indicate statistically significance contribution of insurance to economic growth in Nigeria.

Oko (2012) examined the short and long-run relationships between economic growth and insurance sector development in the Nigerian economy. The fixed-effect model was adopted and relevant data within the period of 1985 and 2009 were collated and analyzed with the use of co-integration analysis. Gross domestic product (GDP) was adopted as a proxy for the level of economic growth, while numbers of insurance companies (NIC), premium of life-insurance (PLI), premium of non-life insurance (NLP), total insurance investment (TII), and inflation rate (INF) were used in measuring insurance sector growth. The findings revealed that insurance sector growth and development positively and significantly affects economic growth. The result of the Granger causality test also revealed that the extent of influence the insurance sector growth had on economic growth was limited and not direct because of some cultural, attitudinal traits and values in the country.

Boon (2005) investigates the growth supportive role of commercial banks, stock markets and the insurance sector. The author's findings show short and long run causality running from bank loans to GDP, and a bi- directional relationship between capital formation and loans. GDP growth seems to enhance stock market capitalization in the short run and the market capitalization enters significantly when determining the capital formation in the long run. Total insurance funds affect GDP growth in the long and capital formation in the short and the long run.

Knowledge gap

Looking at the empirical reviews above, some of the review differs by location; all seem to center on the impact of insurance on economic development of various countries. None of the literatures worked on Insurance growth nexus in Nigeria using bound test approach Hence, we want to fill the gap so as to contribute to knowledge

III. Data and Model Specification

The study adopted the ex-*post facto* and analytical research design. The data is of secondary nature represented by annualized time series drawn from the Central Bank of Nigeria Statistical Bulletin covering the period under study. It used a combination of descriptive statistics and regression, and Philip and Peron (PP) test used for unit root test. Also diagnostic tests were carried out on the regression model to ensure that the key assumptions underlying the Classical Linear Regression Model (CLRM) were not violated not minding that ARDL is a dynamic model.

Model Specification: The study adopts the Auto regressive distributed lag model (ARDL) Bound test Based Approach to model short and long run shocks and Dynamics of Insurance to Economic growth of Nigeria. The proxy used for Insurance is the insurance premium income, insurance total assets and insurance investible funds while the economic growth is proxied by Gross domestic product.

The Auto regressive distributed lag model (ARDL) Bound test Based Approach involves the following steps: The first step involves determining whether the datasets contain unit roots in the individual level series and that they are integrated of the same order; that is, they require

the same number of differencing to attain stationary. Unit root tests are used to determine whether time series exhibit mean-reverting behavior. If sets of time series, such as GDP and Total insurance premium income, Total insurance Claims and Total insurance investment funds are 1(1) and 1(0) variable, then cointegration techniques can be used to model their long-run relationship. Philip and Peron (1988) test is used to examine the order of integration. The ARDL shall follow equation (1) as stated below:

$GDP_T = \beta o + \beta_1 TIPI_T + \beta_2 TICL_T + \beta_3 TIIF_T + \ldots\ldots\ldots\ldots$ Ut..... (1)

Where GDP = Gross domestic product, TIPI= Total Insurance premium income. B_O= Constant

TIIF = Total insurance investment Fund. B_I, B_2, B_3= Coefficients

TICL = Total insurance Claims.

IV. Data Analyses and Interpretation

4.1 Data Presentation The datasets for the empirical analyses of this study is presented in Table 1

TABLE 1: Insurance growth nexus

YEAR	GDP	TIPI	TICL	TIIF
1981	94.33	234.1	74.2	0
1982	101.01	248.8	79.2	0
1983	110.06	191.8	78.6	0
1984	116.27	205.7	77.7	0
1985	134.59	195.3	64	0
1986	134.6	254.2	86.4	0
1987	193.13	406.5	109.4	0
1988	263.29	486.6	151.1	0
1989	382.26	673.1	278.9	0
1990	472.65	1013.7	306.5	0
1991	545.67	1296.2	386.9	0
1992	875.34	2445.7	613.9	0
1993	1089.68	4931.9	2684.1	0
1994	1399.7	14519.1	1315.3	0
1995	2907.36	13525.1	1508.9	0
1996	4032.3	11091.3	1654.1	28934.9
1997	4189.25	10941.6	1677.3	37928.2
1998	3989.45	11688.3	1956.2	41451.2
1999	4679.28	14587.3	5923.2	50131.7
2000	6713.57	22531.5	5629.5	61600
2001	6895.2	28981.3	6110.5	78060
2002	7795.76	37765.9	6856.1	85255.7
2003	9913.52	43441.8	9415.2	124267.5
2004	11411.07	50100.8	12084	141220
2005	14610.88	67465.6	12402.4	203113.1
2006	18564.59	81583.8	76276.1	307542.6

2007	20657.32	89104.9	15843.7	427497.2
2008	24296.33	126470.3	25864.9	573154.5
2009	24794.24	153127.1	49498.4	586459.5
2010	54612.26	157127.1	37589.9	585015.8
2011	62980.4	175756.8	39389.2	621095.1
2012	71713.94	175756.8	39389.3	621095.1
2013	80092.56	175756.8	39389.3	621095.1
2014	89043.62	175756.8	39389.3	621095.1
2015	94144.96	175756.8	39389.3	621095.1
2016	99162.3	175756.8	39389.3	621095.1

Source: Central Bank of Nigeria Statistical Bulletin 2016

Where, GDP=Gross Domestic Product, TIPI= Total Insurance premium income.
TIIF = Total insurance investment Fund. TICL = Total insurance Claims

4.2 Basic Descriptive Statistics of GDP and Insurance variables

TABLE 2

	GDP	TICL	TIIF	TIPI
Mean	20086.46	14248.12	196061.2	55588.26
Median	4434.265	4156.800	45791.45	14553.20
Maximum	99162.30	76276.10	621095.1	175756.8
Minimum	94.33000	64.00000	0.000000	191.8000
Std. Dev.	30828.46	19392.85	257628.7	68779.30
Skewness	1.549177	1.370082	0.867648	0.903125
Kurtosis	3.878585	4.091454	1.937766	2.118573
Jarque-Bera	15.55756	13.04965	6.209389	6.059181
Probability	0.000419	0.001467	0.044838	0.048335
Sum	723112.7	512932.3	7058202.	2001177.
Sum Sq. Dev.	3.33E+10	1.32E+10	2.32E+12	1.66E+11
Observations	36	36	36	36

Source: Eviews 10 Computation by the Authors

Table 2 contains the basic measures of central tendency, spread and variations calculated on the level series of the dataset. Of particular interest is the Jacque-Bera (JB) statistics which is a test for normality distribution of the variable are above 3. It is a combined test of skewness(S) of zero (0) and a kurtosis (K) of three (3), which are signs of a mesokurtic distribution. In this case, however, the JB statistics shows that the variables are positively skewed and leptokurtic. The assumption of normality is rejected by the JB statistics, as well as the K and S figures. This, however, does not affect the goodness of the data for the estimation in this study as the kurtosis of all the variables and the skewness are normally distributed. Which is consistent with the properties of most financial time series Also, the probability values of the variables are significant (Brooks, 2008).

4.3 Tests for Stationarity

Table 3: Unit Root Tests for all the Variables using Philip Peron Stat Order of Integration

Variables	PPSTAT	CR@5%	Prob.V	INT	REMARK
GDP	-5.4741	-3.5485	0.0014	I (1)	stationary
TICL	-5.1838	-3.5443	0.0314	I (0)	stationary
TIPI	-3.3539	-2.9511	0.0201	I (1)	stationary
TIIF	-2.1866	-1.9510	0.00296	1(1)	stationary

Source: Eviews 10 Computation by the Authors

Table 3 shows the results of the Philip-Peron Unit Root Tests of all the variables. The results are found to be integrated of the same different order. At first difference, the p-values are found to be less than 5% which is the level of significance, and the Philip-Peron statistics are found to be more negative than the critical values. This is a precondition for the use of Auto regressive distributed lag model (ARDL) Bound test Based Approach for cointegration tests. Having confirmed that the variables are integrated of the different order, the next step will be to run a cointegration regression using all the variables on level series.

Table 4: ARDL Estimation of Results using Base line test

Dependent Variable: GDP
Method: ARDL
Date: 04/29/18 Time: 23:33
Sample (adjusted): 1983 2016
Included observations: 34 after adjustments
Maximum dependent lags: 2 (Automatic selection)
Model selection method: Akaike info criterion (AIC)
Dynamic regressors (2 lags, automatic): TICL TIPI TIIF
Fixed regressors: C
Number of models evalulated: 54
Selected Model: ARDL(2, 2, 1, 2)

Variable	Coefficient	Std. Error	t-Statistic	Prob.*
GDP(-1)	0.207727	0.069793	2.976356	0.0068
GDP(-2)	0.389433	0.065958	5.904283	0.0000
TICL	0.095032	0.039799	2.387835	0.0256
TICL(-1)	0.140813	0.056281	2.501970	0.0199
TICL(-2)	0.149396	0.064863	2.303242	0.0306
TIPI	-0.037243	0.070072	-0.531491	0.6002
TIPI(-1)	0.142317	0.077973	1.825219	0.0810
TIIF	-0.014369	0.027642	-0.519832	0.6081
TIIF(-1)	-0.106303	0.027005	-3.936413	0.0007
TIIF(-2)	0.136284	0.017145	7.948929	0.0000
C	428.4785	374.4909	1.144163	0.2643

R-squared	0.998759	Mean dependent var	21262.28
Adjusted R-squared	0.998219	S.D. dependent var	31342.53
S.E. of regression	1322.640	Akaike info criterion	17.46884
Sum squared resid	40235677	Schwarz criterion	17.96266
Log likelihood	-285.9703	Hannan-Quinn criter.	17.63725
F-statistic	1850.798	Durbin-Watson stat	1.773883
Prob(F-statistic)	0.000000		

*Note: p-values and any subsequent tests do not account for model Selection.

Source: Eviews 10 Computation by the Authors

Table 5: ARDL Estimation of Results using bound test error correction regression

ARDL Error Correction Regression
Dependent Variable: D(GDP)
Selected Model: ARDL(2, 2, 1, 2)
Case 2: Restricted Constant and No Trend
Date: 04/29/18 Time: 23:36
Sample: 1981 2016
Included observations: 34

ECM Regression
Case 2: Restricted Constant and No Trend

Variable	Coefficient	Std. Error	t-Statistic	Prob.
D(GDP(-1))	-0.389433	0.050765	-7.671279	0.0000
D(TICL)	0.905032	0.016300	5.830114	0.0000
D(TICL(-1))	-0.149396	0.021220	-7.040388	0.0000
D(TIPI)	-0.037243	0.052006	-0.716119	0.4811
D(TIIF)	-0.014369	0.008740	-1.644022	0.1138
D(TIIF(-1))	-0.136284	0.011911	-11.44218	0.0000
CointEq(-1)*	-0.402840	0.016540	-24.35535	0.0000

R-squared	0.960089	Mean dependent var	2913.567
Adjusted R-squared	0.951220	S.D. dependent var	5527.150
S.E. of regression	1220.742	Akaike info criterion	17.23355
Sum squared resid	40235677	Schwarz criterion	17.54780
Log likelihood	-285.9703	Hannan-Quinn criter.	17.34071
Durbin-Watson stat	1.773883		

* p-value incompatible with t-Bounds distribution.

F-Bounds Test			Null Hypothesis: No levels relationship	
Test Statistic	Value	Signif.	I(0)	I(1)
F-statistic	101.0609	10%	2.37	3.2
K	2	5%	2.79	3.67
		2.5%	3.15	4.08
		1%	3.65	4.66

Source: Eviews 10
Computation by the Authors

Table 4C Date: 04/29/18 Time: 23:39
Sample (adjusted): 1983 2016
Included observations: 34 after adjustments
Trend assumption: Linear deterministic trend
Series: GDP TICL TIIF TIPI
Lags interval (in first differences): 1 to 1

Unrestricted Cointegration Rank Test (Trace)

Hypothesized No. of CE(s)	Eigenvalue	Trace Statistic	0.05 Critical Value	Prob.**
None *	0.962925	187.9071	47.85613	0.0000
At most 1 *	0.825362	75.88319	29.79707	0.0000
At most 2 *	0.324407	16.55181	15.49471	0.0345
At most 3	0.090312	3.218219	3.841466	0.0728

Trace test indicates 3 cointegrating eqn(s) at the 0.05 level
* denotes rejection of the hypothesis at the 0.05 level
**MacKinnon-Haug-Michelis (1999) p-values

Unrestricted Cointegration Rank Test (Maximum Eigenvalue)

Hypothesized No. of CE(s)	Eigenvalue	Max-Eigen Statistic	0.05 Critical Value	Prob.**
None *	0.962925	112.0240	27.58434	0.0000
At most 1 *	0.825362	59.33138	21.13162	0.0000
At most 2	0.324407	13.33359	14.26460	0.0698
At most 3	0.090312	3.218219	3.841466	0.0728

Max-eigenvalue test indicates 2 cointegrating eqn(s) at the 0.05 level

* denotes rejection of the hypothesis at the 0.05 level
**MacKinnon-Haug-Michelis (1999) p-values

GDP	TICL	TIIF	TIPI
-7.72E-05	0.000126	-4.07E-06	3.24E-05
7.13E-05	0.000141	-2.69E-05	1.89E-05
6.69E-05	9.00E-05	3.24E-05	-0.000181
0.000180	0.000112	3.23E-06	-0.000110

Unrestricted Adjustment Coefficients (alpha):

D(GDP)	3454.049	-1607.535	-494.5521	-98.14702
D(TICL)	-7286.441	-224.4824	-4701.981	-1322.597
D(TIIF)	12322.30	15493.20	-4369.609	-2712.733
D(TIPI)	555.6788	1139.848	1039.094	-1057.498

Discussion of Finding

From table 4, it shows useful base line information concerning the regular ARDL. This reveals the short run information existing between Insurance business and Economic growth of Nigeria. From the analysis of the Autoregressive distributed lag regression result shown above, we have the R-square value of 0.9987% which shows that the independent variables jointly explain about 99% insurance business 1% which is attributable to other variables not included in the model. The adjusted R^2which is 0.9982% indicates that with the inclusion of more variables, the R can reduce maximally to 0.0005%. The Durbin-Watson statistic value of 1.77 indicates that there is no suspicion of autocorrelation in the model. The F-statistics which is 14.17 and a P-value of 0.00000<0.05, also shows that the overall regression is significant and can be used for meaningful analyses.

Total insurance claims of Insurance business in Nigeria in the short run with coefficient 9% shows that 9% of Total insurance claims in Nigeria in the short is caused by value of the increase from Total insurance claims and associated probability value of 0.02 which indicates that Total insurance claims responds positively and significantly to Gross Domestic Product in Nigeria in the short run within the context of this specified model. The result further revealed that 1 percent increase in Total insurance claims in Nigeria in the short run will lead to about 81 percent positive and significant increase in Gross Domestic Product.

Given the coefficient value of GDP as 9% and the probability of t-statistics of 0.02<0.05 which is significant, it shows that is positively and we conclude that Total insurance claims positively and significantly respond to Gross Domestic Product in Nigeria in the short run.

Also, Total insurance premium income of Insurance business in Nigeria in the short run with coefficient -0. 037 shows that 4% of Total insurance premium income in Nigeria in the short is caused by value of the increase from Total insurance premium income and associated

probability value of 0.6002 which indicates that Total insurance claims responds negatively and non-significantly to Gross Domestic Product in Nigeria in the short run within the context of this specified model. The result further revealed that 1 percent increase in Total insurance premium income in Nigeria in the short run will lead to about 4 percent negative and significant decrease in Gross Domestic Product.

Given the coefficient value of Total insurance premium income as 4% and the probability of t-statistics of 060.02>0.05 which is non-significant, it shows that is negatively and we conclude that Total insurance premium negatively and non-significantly respond to Gross Domestic Product in Nigeria in the short run.

Beside, given the lower bound as 2.7, upper bound as 3.6 and the F-statistics as 2. It shows that, Insurance business and economic growth has long run relationship in Nigeria. This can be supported by running a long run relationship using Johansson co-integration approach which was carried out to verify the validity of the bound test ARDLl, Result reveals that from the analyses of residuals from our co-integration regression indicate evidence of co-integration between insurance business series in Nigeria and economic growth which was proxies by GDP. In Nigeria. The * in table 5 shows numbers of co-integration relationship

Table 5 presents the results of the ECM. The model of the ECM is of the form of table 5 and the estimates of the short-run and long-run movements, as well as the error correction term, which proxies speed of adjustment, are provided in Table 5. The Table also shows useful long-run information. The equilibrium adjustment coefficient (-0.4028) enters with a correct sign (negative). This suggests that insurance business series in Nigeria converge to long-run equilibrium; deviations from this equilibrium relation as a result of shocks will be corrected over time. It can also be observed that the coefficient of the ECT (-1) tends to one, indicating that the speed of adjustment to equilibrium is fast. It follows that about 40% of the deviation from equilibrium path is corrected for 2year and half per annum. The ECM results, therefore, confirm the long-run relationship between insurance business series in Nigeria as observed from the residuals of table 5.

V Conclusion

The work studied the impact of insurance to economic growth of Nigeria. The study focused on using insurance premium income, insurance investment and insurance claims as indicators to measure insurance business and GDP for economic growth .Result reveals that insurance premium positively and significantly impact on the GDP while insurance claims and insurance investment negatively and non-significantly impact on GDP.

The analyses of residuals from our cointegration regression indicate evidence of cointegration between insurance and economic growth of Nigeria Similarly, estimates from the error correction model provide evidence to show that insurance and economic growth of Nigeria series converge to a long run co integrating equilibrium at a reasonably fast rate. The ECM results also show that short-run changes in insurance to economic growth of Nigeria have a positive and statistically significant impact on short-run changes and its long run impact can be corrected within the shortest period of time in Nigeria.

References

Adams, B. (2008), The Insurance Industry and Nigerian Economy, Light does not Shine in Light. *Journal of Economic survey 22(3).*

Agwuegbo, S.O.N, Adewole, A.P &Maduegbuna, A.N (2010).Predicting insurance investment: a factor analytic approach. Journal of Mathematics, Statistic and Science 6(3) 321-324

Ahmed, K. R. (2012): Enhancing the Value of Insurance in Nigeria through Paradigm Shifts. Journal of Chartered Insurance Institute of Nigeria Vol. 12 No. 3 July, pp. 16-19.

Aneke, J.I. (2012). The Position of Insurance Industry in Nigeria in the Consolidation Era. *Paper Presented during Insurance Student Dinner and Award night at universal hotel Enugu.*

Arena, M. (2006). Does insurance market promote economic growth and employment in the EU. Journal of Risk and Insurance, 34(5)921-

Boon TK (2005). Do Commercial Banks, Stock market and Insurance Market Promote Economic Growth? An analysis of the Singapore Economy, working paper of the school of Humanities and Social Studies, Nanyang Technological University.

Beenstock M, Dickinson G, Khajuria S (1988). "The determination of life premium: An International Cross-section Analysis 1970-1981". Insur.Math.Econom., pp. 261-270

Brooks C (2008) Introductory Econometrics for Finance(New York) Cambridge University Press 2nd Edition

Brown MJ, Kim K (1993). "An international Analysis of life Insurance Demand".American Risk and Insurance Association. J. Risk Insur., 60(4): 616-634.

Chilekeze L. (2010) Repositioning Insurance Industry for a Prosperous Future. Future summit 2008, Transcorp Hilton Hotel Abuja.

Gollier, C. (2003). To insure or not insure?an insurance puzzle. The Geneva Papers on Risk and Insurance, 24(3)67-82

Irukwu, J.O. (1989). Insurance markets in the Third world; will they play a significant role in the international insurance scheme. Insurance Torch Journal, ASINS, ESUT, 1(2)13-34.

Kugler, M &Ofoghi R (2005). Does insurance promote economic growth? evidence from the UK. Division of Economics, University of Southampton, UK

Levine, R, Loayza. N, & Beck, T (2000). Financial intermediation and growth: causality and causes. Journal of Monetary Economics, 46 (1)31-77

Levine, R. (2004). Finance and growth: theory and evidence. NBER Working Paper No. 1703

Nwite S.C. (2004) Element of Insurance. Immaculate publication ltd, Enugu

Oluoma, R. (2010).Elements of Insurance. Lagos: Impressed Publishers

Oko, P.C (2012). Insurance market activity and economic growth: evidence from Nigeria. Asian Economic and Social Society, 1(4)245-253

Outreville, J. (1990). The Economic Significance of Insurance Market in Developing Countries. The Journal of Risk and insurance, 57,487-498.

Pen-Fen, Chin-Chiang, Chin-Feg (2011). How Does the Development of the Life Insurance Market Affect Economic Growth? Some International Evidence. Journal. International Development.

Skipper H (1997). "The effect of Banking and Insurance On the growth of Capital and Output". Centre for risk Management and Insurance Working paper, 02-1, Robinson College of business, Georgia State University, Atlanta

Ward, D &Zurbruegg, R (2000). Does Insurance Promote Economic Growth? Evidence from OECD Countries. Journal of Risk Insurance, 67(4)489-506

Ward, D &Zurbruegg, R (2000). Does Insurance Promote Economic Growth? Evidence from OECD Countries. Journal of Risk Insurance, 67(4)489-506

Webb, I., Grace, M. F. & Skipper, H.D (2002).The Effect of Banking and Insurance on the Growth of Capital and Output. Center for Risk Management and Insurance, Working Paper 02

.Wadlamannati KC (2008). "Do Insurance Sector Growth and Reforms affect Economic Development? Empirical evidence from India". J. Appl. Economy. Res., 2(1): 43-86.

Marijuana C, (2009). "Insurance Sector development and Economic growth in Transition countries". Int. Res. J. Financ. Econom., issue 34.

Sümeg K (2008). "The relationship between Insurance and Economic Growth in Europe. A Theoretical and empirical analysis". Empirica, 35(4)

Zou, H. & Adams, M.B (2004). The corporate purchase of property insurance: Chinese evidence. Journal of Financial Intermediation, 56(15)1174-1180