The performances of insurance industry and the Nigerian economic growth

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A R T I C L E I N F O

A B S T R A C T

This research analyzed the insurance industry and economic growth in Nigeria between 1980 and 2015.Secondary data ranging from real gross domestic product, premium of insurance business, claim expenditure of insurance industry and inflation rate were utilized, and sourced from Central Bank of Nigeria (CBN).The Ordinary Least Squares (OLS) multiple regression techniques, Descriptive statistics, Augmented Dickey Fuller (ADF) test of stationarity and ARDL Bound Test Co-Integration were adopted for the model in the Study. The findings revealed that the premium of insurance industry (PMI) impacts negatively on economic growth both in the extended and short run period. The claim expenditure of insurance industry (CEX) revealed a progressive relationship with economic growth in the long run and a negative relation with growth in the short run. We therefore conclude following the Keynesian theory of aggregate demand which states that, ''if we will have to wait till the long run, we will all be dead'', that insurance industry in Nigeria has not impacted positively on economic growth of Nigeria within the period under review and its operations and investment have not been prominent and contributory to the growth and development of Nigeria. Based on these outcomes, we recommend amongst others, that more investment ought to be made towards the insurance industry in Nigeria especially in terms proper policy formulation by the government that would channel funds and encourage competition among the players in the industry and invariably contribute to the growth of the economy.

1. Introduction

One of the yardsticks of measuring the growth and development of an economy especially, developing country like Nigeria is the size and maturity of its Insurance Industry. The reasons being that Insurance operators aids in the accumulation and mobilization of funds from the surplus spending unit of the economy to the deficit spending unit which are used for investment purposes. The relevance of the Insurance Industry is even more obvious in less developed economy because the financial system (formal and informal) are unsophisticated and lack basic infrastructural facilities which would have facilitated the growth of their economies. These deficiencies have increased the dependence of the less developed economies on the advanced economies with its attendant negative effect on their balance of payment.

In modern time no economy can function efficiently and effectively without the support of an organized and vibrant insurance company. This gives

credence to the fact why the government of these less developed countries attaches such great importance to the performance of Insurance companies as well as the character and quality of the institution and individuals that operate the insurance enterprises.

It is pertinent to state that the Nigerian Insurance Industry protect and conserve the wealth of the Nation whilst at the same time assisting to generate more wealth, all with the ultimate objective of ensuring the socio-economic well-being of the nation. The Insurance Industry had contributed greatly to the development of the Nigeria economy. As at 2015, the total premium income of Nigeria Insurance Industry has risen to over ₦350 billion (This Day online Newspaper, 2016).This figure clearly indicates the relevance of the Insurance Industry as major factor in the national economy.

Insurance industry had been recognized as a major tool in the functioning of the economy, Insurance services are necessary in order for some bank loans to be approved, and even for entities seeking contract from private firms and even government establishment. But despite this importance, some individuals still shy away from patronizing insurance companies (Oke, 2012). While Insurance Industry has been given a prominent place in advanced economies, the growth in number of Insurance companies and volume of business underwritten by Insurers is still faced with so many challenges in Nigeria. Adeyele (2011) opined that Insurance Industry is faced with serious challenges such as poor image, low growth in real terms, low public awareness, low capitalization and capacity.

Most of the existing studies on Insurance – growth nexus focused on the developed/industrialized countries. To the best of our knowledge, most studies (Eze & Okoye 2013; Mirala, Mnicu & Silviu 2014; Oke, 2012; Feyen, Roberto & Rodney, 2011; Olayungbo, 2015; and Akinlo, 2014.) focused on Nigeria the relationship between Insurance premium and economic growth. They failed to look at Insurance premium and Insurance claim as leakages and injections respectively. They analyzed the Insurance Industry from the premium perspective only which is an injection from the economy. When people insure they pay their premium from their income which is a form of expenditure thus forming a leakage but when they are paid claim, it is an injection. However in the works of Monogbe (2015) and Philip (2012), they used premium of Insurance companies and Investment of Insurance companies together as independent variables. Premium is a part of income to the Insurance Industry, also investment is also part of income to Insurance companies, when both of them are used together it will result to the problem of serial correlation. However, this paper focuses on the contribution of the Insurance Industry from the insurance premium and claim perspectives. That is, the paper analyses the contribution of insurance industry from the insurance premium and claim perspectives to economic growth in Nigeria. Insurance investment is not included because of the perceived problem of serial correlation.

The remaining section of the paper is divided into four parts. Section two discusses empirical literature. Section three deals on the method of analysis employed. Section four gives the empirical results and the discussion of findings and the last sections focuses on conclusion.

2. Literature review

Hadhek & Mrad (2014) reviewed the causal relationship between Insurance and economic growth in Nigeria. The scope of cover was from 1986 – 2010. In this study the Vector Error Correction Model (VECM) was used. The Co- Integration test shows that premium, Inflation, Interest rate and GDP are Co - integrated when GDP is the endogenous variable. In this study the Granger Causality test reveals there is no causality between economic growth and premium in the short run while premium, Inflation and Interest rate. Granger causes GDP in the long run which means there is unidirectional causality running from premium, inflation and interest to GDP. The estimated result shows that GDP, premium, interest rate and inflation are non-stationary at the level data but stationary at the first differences. From the result it shows that the Insurance Industry contributes to economic growth in Nigeria as they provide the necessary long – run fund for absolving risks and investment.

Eze & Okoye (2013) studied the impact of Insurance practice on the growth of the Nigerian economy. The variables used for the study are Insurance premium income, total Insurance investment and income of Insurance development used as determinants of Insurance development was used as determinants of Insurance practice. Unit root test, Error Correction Model and the Johansen Co- Integration test were used in data analysis, and it was used to determine the short and long run effect of the model. In the study Insurance premium capital (IPC), Total Insurance Investment (TII) and Insurance sector development (ISD) which as well serve as the Independent variables, while GDP at constant price in 1990 was used as a proxy for Economic growth. The result of the analysis shows that the Insurance premium capital has significantly impacted on economic growth in Nigeria. Conclusively the level of total Insurance Investment has significantly affected economic growth in Nigeria. The meaning of this is that the Insurance Industry would contribute more to GDP in the long run, thereby leading to economic growth. Mirala, et al,. (2014) seek to establish the correlation between Insurance and economic growth in Romania. Statistical methodology was used to examine some key variables like the share of Gross premium written to GDP(Insurance penetration) and the average value of the Insurance premium paid by an inhabitant across one year(Insurance density) as Insurance indicators. The focus of the analysis was to evaluate the relationship between GDP and Insurance indicators. The scope spanned through 1997 to 2012. The analysis of the correlation between the variables identified was analyzed through the Pearson Correlation Coefficient (R) which shows the intensity and direction of correlation. The result showed that there is high correlation, based on the causal link, between the Insurance market measured by the degree of Insurance penetration, and the degree of density and the economic growth, measured by GDP growth per capita. Oke (2012) examined the short and long – run relationship between the Insurance sector development and economic growth in Nigeria. The scope was from 1985 – 2009.

The model that was adopted was the Fixed – Effect model, and relevant data were collated and analyzed using the Co – Integration analysis. In this study, premium of Life – Insurance(PLi) Premium of non – Life Insurance(NLP), number of Insurance companies(NIC),total Insurance Investment(TII),and the Inflation rate(INF) were used in measuring Insurance sector growth, while Gross Domestic Product(GDP) was adopted as the proxy for the level of economic growth. From the result gotten, it shows that there exist a long – run relationship between and economic growth and the development of the Insurance sector in Nigeria. Also the result of the Granger causality test also revealed that the level of influence the Insurance sector growth had on economic growth was limited and not direct, due to attitudinal traits and value, cultural disposition in the country. Monogbe (2015) investigates the effect of Insurance sector development on the growth of the Nigeria economy. It span through 1981 – 2013. Secondary data was used; also the method that was used to carry out the

research was the Augmented Dickey Fuller test, Ordinary Least Square method, Descriptive Statistics, Co- Integration and Granger Causality. The variables used for the study are Gross Domestic Product(GDP), Total claim payment(TCP),Total Insurance premium (TIP) Total Insurance Investment (TII),Total Insurance returns (TIR),Error term (Ut). The result of the findings shows that total Insurance Investment and total Insurance premium had contributed significantly and positively to the growth and development of the Nigeria economy. Summarily, an increase in the activities of Insurance companies in Nigeria will lead to an increase in economic growth .

Olayungbo (2015) conducted a study on the effects of life and non – life Insurance on economic growth in Nigeria. The period span from 1976 – 2013, the method of analysis was the Autoregressive Distributed lags (ARDL) because of the different order of integration of the variables under the study. After estimating the growth model, the Bound test shows a long run relationship existing among life, on – life Insurance and economic growth in Nigeria over the period of study. The results from the long run and short run dynamics leads credence that there exist a positive and significant contribution of life and non – life Insurance on economic growth in Nigeria. Conclusively, life and non – life Insurance acts as complements to economic growth in Nigeria rather than substitutes. Hadhek & Mrad(2014) studied the relationship between Insurance business and the Economic growth of 23 OECD countries. The period was from 1990 – 2011. Static Panel Data Model was used. Some of the variables used for the analysis are GDP per capital growth rate, Total Insurance penetration rate, Life – Insurance penetration rate, Life Insurance density. The result showed that there is no link between the life Insurance density and economic growth for the group of countries examined, and also total Insurance density and non – life Insurance density has a negative effect on economic growth.

Olajide (2013) conducted a study on Corporate Governance and Insurance Company Growth. It used the empirical design by using the responses of survey, structured questionnaires of 112 respondents. Data analysis and hypothesis testing were analyzed using the Pearson Product Coefficient of Correlation (r). The population of study consists of the Insurance companies in Nigeria. Fifteen Insurance companies were selected from the population through random sampling. The result revealed that good corporate governance, and the new code of good corporate governance for the Nigerian Insurance Industry enhances Insurance companies' growth in Nigeria. Philip (2012) conducted a study to empirically access Insurance market activity in Nigeria in a bid to determine its impact on economic growth. The period under review was from 1970 – 2008. The study used the Johansen Co integration and Vector Error correction approach to estimate the relationship between Insurance density measures (premium per capita) and growth. The result showed the Insurance market activity, and Inflation and savings rate as control variables are the determinants of economic growth.

Umoren & Emen (2016) investigated the relative contributions of the Insurance Industry to the growth of the Nigerian economy within the period of 1970 to 2012. Multiple linear regression method was used to test the research hypothesis. Their result showed that the Insurance sector growth has contributed significantly to the economic growth in Nigeria within the period under review; however, the claim expenditure has a negative influence on GDP growth. They are of the opinion that claim administrators should be trained in claims reporting process like, investigation, verification of claims, loss minimization and evaluation. This will help to reduce the frequency of claim notification and increase premium income for economic development and growth.

From the various works reviewed, there is no doubt that empirical literature on the relationship between insurance industry and economic growth abound. However, the impact of insurance industry on economic growth has remained inconclusive in the literature (Hadhek & Mrad, 2014; Monogbe, 2015). It is against this backdrop the study examines the impact of insurance industry on economic growth in Nigeria.

3. Research and Methodology

3.1 Data and Sources

To capture the impact of Insurance Industry on the growth of the Nigerian economy, Real Gross Domestic Products (RGDP) is used as proxy for Economic growth; Inflation Rate (INF) and money market Interest Rate (INT) as control variables, while premium Income of the Insurance Industry (PMI), Claim Expenditure of the Insurance Industry (CEX) act as the major explanatory variables in the model. The disturbance variables not specified in the model is being captured by the stochastic error term. Before the variables were included in the model they were tested for stability and cointegration. The variables where sourced from the statistically bulletin of the Central Bank of Nigeria, 2017 edition.

3.2 Model Specification

General form of ARDL model with n lags for variable Y and m lag for variable X is as follow:

$$Y_t = a_0 + \sum_{i=1}^{n} \alpha_1 Y_{t-i} + \sum_{i=0}^{m} \alpha_2 X_{t-i} + \varepsilon_t \qquad (1)$$

$$\Delta Y_t = \beta_0 + \sum_{i=1}^{n} \beta_1 Y_{t-i} + \sum_{j=0}^{m} \beta_2 X_{t-j} + \psi ECM_{t-1} + \varepsilon_t \qquad (2)$$

Whereas, the general expression of an Autoregressive Distributed Lag Error Correction Model is as follows:

In equation 2 the speed of adjustment parameter (ψ) in the short-run model must be negative and statistically significant. The Error Correction Term specifies that any divergence from the long-run equilibrium between variables is corrected in each period and how much time it will take to restore the long-run equilibrium position.

Where:

$$ECM_{t-1} = residuals\ acquired\ from\ coingration\ model$$

The functional relationship between exchange rate misalignment and macroeconomic fundamentals can be express as follows:

$$RGDP = f\ (PMI + CEX + INF + INT)$$

3.3 Method of Data Analysis

The study adopted the modified version of OLS model by Pesaran *et al.,* (1999) known as the ARDL in estimating the effect of insurance industry on economic growth in Nigeria. This is because the preliminary test analysis of the variables meets the conditions of applying the ARDL techniques. First, the variables are not purely I(1) integrated order, they are in the order of I(0) and I(1). Secondly, non is integrated at the order of I(2) (Duasa, 2010;Janjua, Samad & Khan, 2014; and Gbanador & Ikue-John, 2017). Nevertheless, before the model was estimated, preliminary tests were carried out on the variables to ascertain the properties of the variables. These examinations were to substantiate the stationarity and long run relationship of the variables. This is as a result of most time series data being prone to unit roots problem.

The econometric tools that were employed for these verifications are the augmented by Dickey & Fuller test for stationarity and bound-testing co-integration techniques. Also, normality of the error term, test for Homoscedasticity, test of serial independency of the error term, test for functional form and, the cumulative sum (CUSUM) and cumulative sum squared (CUSUM square) tests for the stability of the coefficient in the modified version of OLS model by Pesaran *et al.,* (1999) were investigated. These test results are presented and analyzed in the section below.

4. Result and Discussion

The stability properties of the data are examined with the unit root model augmented by Dickey & Fuller (1979) and results validated the model of Philip & Perron (1987) and reported in Table 1, while the cointegrating relationship is tested with the model of Pesaran, Smith & Shin (2001) and reported in Table 2. The Model of Pesaran*et al.,* (2001) was chosen over the Engel & Granger (1987) two-step cointegration technique because the integrating order of the series in the models are mixed (I(0) and I(1)), also non is integrated at I(2).

Table 1: Test for Unit Test and Order of Integration

Variables	Augmented Dickey-fuller Test Methods				Order of Integration
	Calculated Values		Critical values		
	Level	1st difference	5%	1%	I(d)
$lnGDP_t$	0.8454	-3.2165**	-2.9511	-3.6394	I(1)
$lnCLAIMX_t$	-0.6434	-6.2359***	-2.9540	-3.6463	I(1)
$lnPREY_t$	-0.9333	-8.5564***	-2.9511	-3.6394	I(1)
lNF_t	-2.9808**	-5.7458***	-2.9511	-3.6329	I(0)
lNT_f	-3.3008**	-5.8248***	-2.9484	-3.6394	I(0)

Source: *Author's Computation. Note: *, **, *** denotes the rejection of null hypothesis of unit root at the 10%, 5% and 1% significance levels respectively. The lag length selection throughout this research is based on Schwarz Information Criterion (SIC)*

The test method Augmented by Dickey & Fuller (1979) assumed that the series have unit root or not stationary if the calculated values are less than the critical value at the 10%, 5% and 1% level of significance respectively in absolute terms. The test method also reported the order of incorporation of the series in the model, whether the series is incorporated at order I(0) or order I(1). If the series is incorporated at order I(0), it means that the series has no unit root at it level form and that any shocks in the short-term will varnish in the long-term. If the series is incorporated at I(1), it means that the series has unit root at it level form and that any shocks in the short-term will not varnish in the long-term. Results in table1 shows that economic growth (Log of real GDP), premium Income of the Insurance Industry (log of PMI), and the Claim Expenditure of the Insurance Industry (log of CEX) are not stationary at their level form since

their calculated values is less than the critical values in absolute term at 5% level but were found to be stationary when 1st difference since their calculated values were greater than the critical values in absolute term at the 5% level. Also, inflation rate (INF) and money market interest rate (INT) were stationary at their level form since their calculated values were greater than the critical value in absolute term at the 5% level as shown in column 2, 3, 4 and 5. Column 6 of table1 shows the decision or order of incorporation of the series in the model. Economic growth (Log of real GDP), premium Income of the Insurance Industry (log of PMI), and the Claim Expenditure of the Insurance Industry (log of CEX) are incorporated at order I(1) since they were stationary after 1st difference while inflation rate (INF) and money market interest rate (INT) are incorporated at order I(0) since they were stationary at their level form. Thus, the series in the model are not of the same order of integration. These necessitate the use of bound-testing co-integration techniques for test of possible long-run relationship and Auto Regressive Distributional Lag (ARDL) for model estimation. The test for co-integration and model estimation are reported on table 2, table 3 and table 4.

Table 2: Bounds Test Co-integration Result. (Ho: No long-run relationships exist)

Significant Level	I(0) Bound	I(1) Bound	Statistics
10%	2.45	3.52	F-Stats = 5.2814***
5%	2.86	4.01	k = 4
2.5%	3.25	4.49	
1%	3.74	5.06	

Source: *Author's Computation*

The test method on Table 2 reported the null hypothesis of no co-integration among the Variables. We reject the null hypothesis of no co-integration if the F-statistics is greater than the upper bound (i.e., **I(1)** Bound limit) at 5%, the test is inconclusive if the F-statistics lies between the lower bound and upper bound limit Afees & Ajide (2016). The result in Table 2 above shows that the F-statistics is 5.2814 and the upper bound critical value at the 5% is 4.49. We reject the null hypothesis of No Long-run Relationship and concluded that there is at least one co-integrating relationship among the variables in the model since the F-statistics is greater than the upper bound limit at the 5%, (i.e. 5.2814 > 4.49).

Table 3: the Static Equilibrium Model of Economic Growth and Insurance Company in Nigeria- Dependent Variable: Real Gross Domestic Products (RGDP)

Regressor	Parametres	T-Stats	Prob
C	-1.134187	-0.193057	0.8480
$lnCLAIMS_t$	0.3606***	3.815558	0.0012
$lnPREY_t$	-0.136933	-1.537706	0.1406
INF_t	0.0148**	2.477223	0.0228
INT_t	-0.045***	-2.720674	0.0136

Source: Author's Computation. R^2 = 0.8818; ADJ R^2= 0.8780; F-statistics = 1312.9; Prob. (0.0000); Durbin-Watson = 2.4181

The Schwartz information criterion (SIC) was used for the selection of model this is because the models that were developed using the other model selection criteria in the build-up of Autoregressive Distributional Lag model such as Akaike Information Criteria (AIC), Hannan Queen Information Criteria (HIC) and Adjusted R^2 did not have a better fit than SIC. Also, the diagnostic assumptions of OLS were not satisfied using this other model selection criteria.The maximum lag length used for the dynamics model was provided by the researcher while the system was used to provide the optimum lag length.

The selected ARDL model of (4, 1, 0, 3, 0) has R^2 of 0.8818 showing that the model have a very strong explanatory power, that 88.18% of the total variation in economic growth in the model is explained by premium Income of the Insurance Industry (log of PMI), the Claim Expenditure of the Insurance Industry(log of CEX), Inflation Rate (INF) and money market Interest Rate (INT) while the remaining 11.82% are explained by other variables that are not included in this model but are taken note of by the stochastic term. The Analysis of Variance (ANOVA) of the entire model shows that the calculated Fisher ratio is very high as compared to the Fisher table ratio at the 1% (i.e., F-stats of 1312.92 and P-value of 0.0000) implying that the overall model is statistically significant. Also, the Durbin-Watson ratio of 2.4181 shows that there is no 1st order autocorrelation in the error term since the ratio is greater than 2.

The static model o Table 3 shows that the Claims Expenditure of the Insurance Industry related with economic growth positively and the relationship is inelastic and statistically significant at the 5% level. The positive sign and inelastic relationship implies that a one percent increase in the Claim Expenditure of the Insurance Industry will lead to a less than one percent increase in economic growth in Nigeria. This result corresponds with exiting a priori, which state that an increase in expenditure will lead to increase in economic growth. Also this result agrees with the work of Olayungbo (2015), Monogbe (2015) and Umoren & Emen (2016) whose study contributed positively and significantly to economic growth in Nigeria. This result shows that an increase in the expenditure of the insurance industry can pooled the economy out of it current recess state to increasing growth path. The static model of Table 3 shows that premium Incomes of the Insurance Industry related with economic growth negatively and that the relationship is inelastic and statistically insignificant at the 5% level. The negative sign and inelastic relationship implies that a one percent increase in the premium Income of the Insurance Industry will lead to a less than one percent decrease in economic growth in Nigeria. This result corresponds with exiting a priori, which state that an increase in saving (which is leakage out of the spending stream) will lead to decrease in economic growth. Also this result agrees with the work of Olayungbo (2015) and Umoren & Emen (2016) whose study shows negatively relationship between premiums Income of the Insurance Industry to economic growth in Nigeria. This result shows that an increase in the premium Income of the Insurance Industry will increase saving and in turn improving capital formation, reduce interest rate, improve investment and finally increase economic growth, everything being equal. Table 4 below shows the dynamic relationship among economic growth and

premium income of insurance industry, claims income of insurance industry, inflation rate and money market interest rate in Nigeria from 1980 to 2016. It is a dynamic model because it contains different lags of the variables included in our study.

Table 4: Short Run Dynamics (ARDL) Model
Dependent Variable: Real Gross Domestic Products (RGDP)

Regressor	Parametres	T-Stats	Prob
$D(lnRGDP)_{t-1}$	0.8876***	24.91511	0.0000
$D(lnCLAIMX)_t$	-0.0256**	-2.424189	0.0255
$D(lnCLAIMX)_{t-1}$	-0.0270**	-2.512133	0.0212
$D(lnCLAIMX)_{t-2}$	-0.016663	-1.491981	0.1521
$D(lnCLAIMX)_{t-3}$	-0.0207*	-1.899367	0.0728
$D(lnPREY)_t$	-0.015380	-1.389928	0.1806
$D(INF)_t$	0.0008*	1.841185	0.0813
$D(INF)_{t-1}$	0.000142	0.317778	0.7541
$D(INF)_{t-2}$	0.0015***	4.187371	0.0005
$D(INF)_{t-3}$	-0.0051***	-3.590488	0.0020
ECM_{t-1}	-0.1123***	-3.152591	0.0052

Source: Author's Computation

The analysis on Table 4 shows that the coefficient of the one period lag of economic growth is positive and significant. This is true as previous years economic activity can stimulate current year and future periods of economic activity (see Taiwo, 2013). The result agrees with the Kaldor's 2nd principle of increased in output. Kaldor's argued that output of current period is link to the output of previous period. This implies that current output is a function of previous output in economic activity.The magnitudes of the short-term coefficients are smaller than the magnitudes of the (elasticity's) of the long-term coefficients as expected. Table 4 also shows that most of the lag of the control variables are correctly sign and statistically significant. Table 4 shows that the coefficient of one period lag of the Error Correction Mechanism was negative and statistically significant at the 5% since the calculated probability value is less than 0.05 (0.001<0.05). The statistical significance of the EMC_{t-1} suggests that economic growth is adjusted to changes in the explanatory variables and lag of the dependent variable within a year. The magnitude of the ECM_{t-1} is 0.1123 or 11.23%, meaning that only about 11.23% of the disequilibrium between the static equilibrium model and short-run dynamics model of economic growth are corrected within a year.

4.1 Model Diagnostic Test

Table 5 shows the summary of the report of diagnostic and robustness check of the model estimated.

Table 5: Summary of Diagnostic Reports

Test/Hypothesis Tested(hypothesis are in null form)	Test type	Test-stats.	Prob.	Decision
Residual Normality (Residuals are Normally Distributed)	Jarque-Bera	0.7316	0.6936	Accept
Serial Correlation (there is no serial correlation)	Breusch-G LM Test	0.8896	0.4291	Accept
	Q-Stat (lag length = 4)	-0.239	0.198	Accept
Heteroskedasticity (there is Homoskedasticity)	Harvey Test	0.4751	0.9054	Accept
	Glejser Test	0.3952	0.9483	Accept
Functional form	Ramsey RESET Test	2.0105	0.1645	Accept

Source: Author's Computation

The classical least square is superior to order estimator because of it BLUE (Best Linear Unbiased Estimate) properties. The BLUE properties of the classical least square are ensured if the following assumptions are observed. Table 5 reveals the that the Error term is normally distributed with a zero mean, there is Homoscedasticity (i.e., the variance of the error term are constant irrespective of the period), No serial dependence of the error term and the model is correctly specified. Therefore, we accepted the null hypothesis of normality, constant variance of the error term, serial independence and functional form of the model. That is, the model estimated have an error term that are normally distributed with a constant variance, and that the error term are serially independent. The Ramsey RESET Test statistic shows that the model is correctly specified. The results of the diagnostic test are robust based on the competing test method as reported in Table 5.

4.2 Stability Test

The stability of the coefficients was also estimated using the CUSUM and CUSUM square test. The test demonstrated whether any of the estimated coefficients falls outside the cycles. If any of the coefficients falls outside the circle then, the coefficient estimated is not stable.

5. Conclusion

It is observed that in the static model the claims expenditure of the Insurance Industry related with economic growth positively and the relationship is inelastic and statistically significant. This corresponded with existing a priori expectation which states that increase in expenditure will lead to increase in economic growth. This implies that as Insurance companies pay out more claims, it will have more positive impact on economic growth. On the other hand, premium income of Insurance Industry related with economic growth negatively. It also conform with a priori expectation, which states that an increase in savings(which is a leakage of the spending stream) will lead to decrease in economic growth, although in order for an Insurance company to be able to pay out claims, premium must first be collected. The economic implication of this findings is that although Insurance claims payout will affect the finances of the Insurance companies, but it will impact positively on economic growth. The result also showed that inflation rate is positively related to economic growth. Also interest rates are negative and have an inelastic relationship with economic growth in Nigeria and it shows that the impact of interest rate on economic growth in Nigeria is statistically significant.

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