

Insurance Penetration and Interest Rate Nexus in Nigeria; an Autoregressive Distributed Lag Approach

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ABSTRACT

This study investigated the effect of interest rate on insurance penetration in Nigeria. Interest rate is a vital monetary instrument that helps in macroeconomic stability through proper mobilization and distribution of capital. It's adjustment affects both banking industry as well as the non – banking financial institutions such as the insurance industry. For developing countries like Nigeria with social and economic problems, the issue of risk management and insurance services as related to economic stability is relatively determined by the structural arrangement of the insurance sector and such arrangement is relative to the performance of all economic actors and the overall social environment. The study used Auto Regressive Distributed Lag (ARDL) bounds test approach. Data was sourced from the central bank of Nigerian statistical bulletin for the period of 1985 to 2019. The result indicated that an increase in interest rate significantly decrease the rate of insurance penetration in both short run and long run. Other control variables used are exchange rate and inflation rate, and the result for this variables indicates that exchange rate has a significant relationship whereas inflation rate has an insignificant relationship with insurance penetration. The result of the co-integrating equation indicates that every movement into disequilibrium is corrected for within one period at a significant rate. The study therefore suggested that prior to any adjustment in the monetary policies or other economic policy, a detailed investigation should be carried out to ensure a favorable compliance of the short run and long run effect of adjusting such on the macroeconomic indices and insurance penetration.

Key word: Insurance, Penetration rate, Interest rate, Auto Regressive.

INTRODUCTION

The significance of interest rate as a monetary policy instrument in every sector of the economy cannot be over emphasized. The primary function of interest rate is to assist in macroeconomic stability by ensuring that capital are properly mobilized and distributed in other to promote economic growth and development. When interest rate is adjusted, the rate of return as a result of the adjustment will relatively reflect on the transfer of portfolio of banks and also non-bank financial institutions. Therefore, insurance industry being part of the non-banking financial institution is also affected by any adjustment in the interest rate (Nyamu, 2016). This implies that the direction and magnitude of any adjustment in interest rate is very important for economic agents in creating enabling environment for both the insurance sector and other sectors of the economy to thrive. As stated by Ehiogu & Nnamocha (2018), the activities of the insurance sector as a

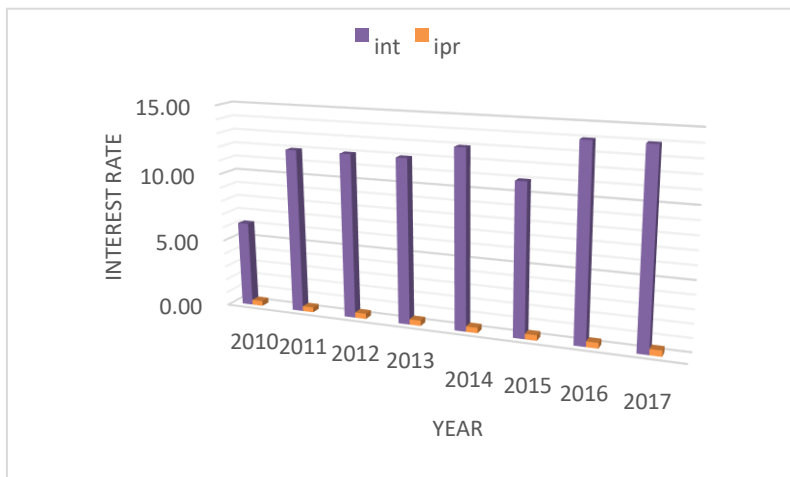
business entity is hugely affected and influenced by the domicile economic environment and major macro-economic indicators such as GDP growth, savings rate and mostly interest rate. For developing countries like Nigeria with social and economic problems, the issue of risk management and insurance services as related to economic stability is relatively determined by the structural arrangement of the insurance sector and such arrangement is relative to the performance of all economic actors and the overall social environment. The performance of the insurance sector on the other hand being part of the economic financial management system has a significant influence on economic development. As stated by Akinlo (2012), the sector is task with providing risk protection to business such that it encourages new investment, expansion, innovation, healthy competition and economic growth. It also ensure effective and efficient financial resources allocation from units with excess or surplus credit to other units with lesser or inadequate credit.

However, having established the importance of the insurance sector to financial and economic development, the performance of the sector is measured by considering the total insurance premium, total profit, insurance density or insurance penetration rate. The rate of insurance penetration can be considered to be the quantity of total insurance premium acquired in a country, expressed as a ratio of insurance premium verses gross domestic product of the same country. As opined by Okonkwo & Eche (2019) insurance penetration rate is referred to as the ratio of the volume of insurance premium and gross domestic product. In a simple term, the rate of insurance penetration is the measure of the growth of insurance premium as compared to the growth in the economy's gross domestic product. In the general insurance concept, premium acquired through life insurance policies when compared to GDP is referred to as life insurance penetration and premium acquired through other non-life insurance policies such as business and health insurance is referred to as non-life insurance penetration when compared with GDP (Elogu, 2017).

Considering the vast population of Nigeria, it is quit surprisingly that only about 10 percent of the Nigerian population acquired insurance of any nature (Aghoghobvia, 2016). In other developed country, insurance relevance is more pronounced among financial service providers and investment agent in the capital market, unfortunately Nigeria and other less developed country are yet to achieve full potential in the insurance sector. Though this sector has over the years tried to ensure adequate and sustainable improvement, however, in the resent years, the dynamics of operation practicable in this sector have dwindled as most insurance companies could not meet up with competitive standards and as a result collapsed (Ezema & Ibeabuchi, 2018). These recorded poor performance of the insurance sector in Nigeria can be linked to inadequate management of the economic environment needed for insurance companies to thrive and one of the major macroeconomic indices that has huge influence on savings and investment is interest rate. According to economic theories, savings and the rate of interest primarily encourages the formation of capital needed for investment and any fluctuation in variable will lead to shift in assets portfolio.

As opined by Elogu and Nnamani (2018), interest rate seems to possess more direct influence on the direction of every other economic variable raging from individual decision, creation of jobs, corporate dividend and most especially monetary policies. Generally the growth of the insurer's financial profit and the rate of insurance penetration has both internal and external influence. The internal influence is basically the insurer's specific characteristics while the external influenced can be linked to macroeconomic actors such as interest rate. Recalling the national income identity, interest rate has a direct effect on savings rate which relatively influence investment and positively or negatively affects the total national income which in that accord triggers the same effect on total insurance premium that determined the insurance penetration rate when compared with the gross domestic product. Over the years, the insurance sector has witness a sluggish progress as stipulated by insurance sector penetration percentage as a measure of insurance sector development. Fig 1: below illustrates the Nigerian interest rate and insurance penetration rate from 2010 to 2017 sourced from the central bank of Nigeria statistical bulletin.

Fig 1: Nigeria interest rate



Source: Authors, from CBN statistical bulletin 2018

In 2010 and 2011, interest rate in Nigeria was at about 6.25 %, and 12% respectively, this indicated a massive 50% increase. The rate was maintain at 12% for 2012 and 2013 before another increase to 13% in 2014 and the drop to 11% in 2015. In 2016 and 2017, it was increased to 14% for both years. Also, Insurance penetration in Nigeria was in an average of 0.37 within 2010 to 2012 and an average of 0.39 from 2013 to 2017 (CBN, 2018). Evidence from world bank (2018) indicated that premium per capita on the Nigerian insurance industry is the lowest around the world with an estimated rate of US\$10.8 million in 2014 and US\$13.2 million in 2017 and this has consequently left significant untapped potential for coverage within the market and significantly poor when compared to that of other nations. Within this period, related empirical studies suggests that performance of key economic sectors of which the insurance sector is among have not achieved favorable result. Ezema & Ibeabuchi (2018) suggested that the performance of most government policies on economic development have not been transformational or sustainable and most economic sectors including the insurance sector is battling to meet up with expectations. Other studies that are of similar opinion are that of Okparaka & Makwe (2019), and Owolabi & Adegbite (2014).

This objectionable state of the Nigerian insurance sector has raised a lot of inquiry as to what possibly could be the problem with the sector. Numerous government policies have been channeled towards improving the situation and thereby making the sector more viable and competitive. Some of these efforts includes the establishment of the National Insurance Commission (NAICOM) Act in 1997, Insurance Act in 2003, establishment of the Nigerian Council of Registered Insurance Brokers (NCRIB) Act in 2003 and the Consolidation and Recapitalization Guidelines of 2005 among others (Okparaka & Makwe, 2019). A significant number of other laws and regulation that affects the insurance sectors have been reviewed and updated over the years with new ones enacted all in the bid to equip the regulatory body to consistently support new innovations to expand the activities and operations in the industry. As opined by (Omoke, 2012) this laws are supposed to provide thorough and consistent directives for the sector, reorganize and restructure the insurance business thereby ensuring adequate supervision and regulation in line with the global best practices. Moreover, central banks of Nigeria and other financial and monetary institutions have adopted a number of macroeconomic policies over the years by utilizing monetary policy tools to help them accelerate growth in all sectors of the economy.

However, in spite of these efforts, empirical works related to this subject area still suggests that these unfavorable situation in the insurance sector is far from being salvaged. Base on this premise, it became essential to carry out more empirical analysis by considering some research questions not yet addressed in the extant literature as related to the effect of interest rate on the performance of Nigerian insurance sector, using insurance penetration as proxy for performance. The study is based on the assumption that interest rate has a significant impact on insurance penetration in Nigerian insurance sector. It is very crucial that this

study is carried out at this time that the economy is recovering from recession and emphasis of policy makers focused on economic diversification. Therefore neglecting the implication of macroeconomic forces might prove detrimental to the progress of this sector of the economy.

BRIEF REVIEW OF EMPIRICAL LITERATURE

Although, empirical evidence showed that series of research works have been carried out on insurance sector performance, however empirical review suggests that most of this works focused on insurance sector performance and GDP. Okonkwo & Eche (2019) studied empirically the effect of insurance penetration on Nigeria economic growth between 1981 and 2017. The study adopted multiple regression method using data from the Central Bank of Nigeria statistical bulletin. The result of the analysis indicated a non-significant relationship between economic growth in Nigeria and insurance penetration. The study discovered that the insurance sector did not favorably respond to financial reforms and government economic policies. . Iyodo et al (2020) studied the impact of non-life insurance industry penetration on economic growth in Nigeria, using the Ordinary Least Square Regression method. They measured insurance penetration with five diverse proxies namely: non-life insurance, profits, investment, expenditure and savings of the insurance industry with their time-series statistical data. Their results show that non-life insurance penetration substantially affects Nigerian Economic growth positively during the study period.

Though few studies considered the determinants of insurance performance, based on the knowledge of this review most of the studies focused on other macroeconomic variables such as money supply, inflation and credit to private sector. Ismail (2018) carried out an empirical study on the effect of macroeconomic variables on the performance of insurance companies in Malaysia, using insurance premium to measure insurances sector performance and money supply, inflation rate and credit to private as proxies for macroeconomic variables. The study adopted multiple linear regression method and the finding of the study suggested that macroeconomic variables has a significant effect on insurance sector performance. Also Biru (2017) empirically carried out a study on the determinants of insurance sector profitability in Ethiopia. The study focused on general non-life insurance companies using data that covered from 2011 to 2016. Adopting a panel least square method to cover 12 insurance companies with 72 observations, the findings suggested that insurance concentration ratio and leverage, is statistically significant and positively related with non-life insurance business profitability. Malambo, (2022) studied the Empirical Evaluation of the Uptake of Insurance Products in the Sub-Saharan Africa using Botswana as a case study. The research adopted a survey design approach with questionnaire administration. Findings indicates that lack of income and poverty were key factors contributing to low insurance uptake in Batswana.

Reviewed literature on interest rate indicated that most studies on interest rate gave more importance to other financial institutions neglecting insurance sector. Hajilee, & Al Nasser, (2017) carried out a study on the interest rate uncertainty and stock market development of 12 emerging economies from 180 to 2011. The study adopted Pesaran et al (2001) bounds testing approach to cointegration and error-correction. The results estimation indicated that interest rate has a significant short-run effect on stock market development among all the countries studied. Furthermore, Fatoumata (2017) investigated the impact of interest rate on Nigeria economic growth from 1990 to 2013. The outcome of the analysis indicated that the interest rate slightly impacted on economic growth.

Interestingly, based on the knowledge of the reviewed literature, it is obvious that previous literature on insurance performance or interest rate did not grant an intense focus on interest rate as a primary determinant of insurance sector development using insurance penetration as proxy. Most of the literatures on the determinants of insurance sector performance concentrated mainly on exchange rate and others. While studies on interest rate focused on banking sector and stock market. Therefore this study intend to fill in this gap and thereby contribute to extent literature by investigating the nexus between interest rate and insurance penetration in Nigeria using an autoregressive distributive lag approach.

MATERIALS AND METHODS

To be able to capture the specific objective of this study, the analysis will adopt the Auto Regressive Distributed Lag (ARDL) bounds testing approach and dynamic Error correction model (ECM). The aim of this study is to ascertain the long run and short run effect of interest rate on the performance of Nigerian insurance sector from 1986 to 2019 using ARDL model.

Model Specification

The relationship of between the variables was expressed in its functional form as follows:

The relationship of between the variables was expressed in its functional form as follows:

$$INPR = f(INTR, IFLN, EXCR) \text{ -----e.3.1, where;}$$

INPR is insurance penetration rate;

INTR is interest rate

IFLN is inflation rate

EXGR is exchange rate.

Equation 3.1 is transformed thus;

$$\ln INPR_t = \beta_1 \ln INTR_t + \beta_2 \ln IFLN_t + \beta_3 \ln EXCR_t \text{ e.3.2}$$

$$\ln INPR_t = \beta_1 \ln INTR_t + \beta_2 \ln IFLN_t + \beta_3 \ln EXCR_t + \ln \varepsilon_t \text{e.3.3}$$

The *ARDL(p, q)* generalized form of the model is specified to capture the objective as follows:

$$\begin{aligned} \ln INPR_t = \psi_0 + \sum_{j=1}^p \beta_j \ln INTR_{t-j} + \sum_{i=0}^q \alpha_i \ln IFLN_{t-i} + \sum_{k=0}^q \gamma_k \ln EXCR_{t-k} \\ + \ln \varepsilon_t \text{ e.3.4} \end{aligned}$$

So that $j = 1, 2, \dots, p$ and $i, k, m, n = (0, 1, 2, \dots, q)$

Where ψ_0 is the constant and $\beta_j, \alpha_i, \gamma_k$, are estimated parameters with ε_t as the error term.

To carry out the bounds test for co-integration, the model is specified thus:

$$\begin{aligned} \Delta \ln INPR_t = \sigma \ln INPR_{t-1} + \delta \ln INTR_{t-1} + \theta \ln IFLN_{t-1} + \Omega \ln EXCR_{t-1} + \sum_{j=1}^q \beta_j \ln \Delta INPR_{t-j} \\ + \sum_{i=0}^q \alpha_i \ln \Delta INTR_{t-i} + \sum_{k=0}^q \gamma_k \ln \Delta IFLN_{t-k} + \sum_{m=0}^q \varphi_m \ln \Delta EXCR_{t-m} \\ + \ln \varepsilon_t \text{ e.3.5} \end{aligned}$$

The co-integration bounds-test hypotheses state that the coefficients of the long-run equations are all equal to zero against the alternative that they are not, as stated below:

$$H_0: \beta_j = \alpha_i = \gamma_k = \varphi_m = 0$$

$$H_1: \beta_j \neq \alpha_i \neq \gamma_k \neq \varphi_m \neq 0$$

The short run model of $ARDL(p, q)$ is specified if and only if the null hypothesis was unable to be rejected (i.e. there is no cointegration), the short run model is specified thus:

$$\Delta \ln INPR_t = \psi_0 + \sum_{j=1}^p \beta_j \ln \Delta INPR_{t-j} + \sum_{i=0}^q \alpha_i \ln \Delta INTR_{t-i} + \sum_{k=0}^q \gamma_k \ln \Delta IFLN_{t-k} + \sum_{m=0}^q \varphi_m \ln \Delta EXCR_{t-m} + \ln \varepsilon_t \dots \dots \dots e. 3.6$$

The error correction model (ECM) was specified as:

$$\Delta \ln INPR_t = \Phi ECT_{t-1} + \sum_{j=1}^p \beta_j \ln \Delta INPR_{t-j} + \sum_{i=0}^q \alpha_i \ln \Delta INTR_{t-i} + \sum_{k=0}^q \gamma_k \ln \Delta IFLN_{t-k} + \sum_{m=0}^q \varphi_m \ln \Delta EXCR_{t-m} + \ln \varepsilon_t \dots \dots \dots e. 3.7$$

Where;

Δ = the first difference operator;

Φ = speed of adjustment parameter which shows the convergence in the long-run with a negative sign.

In conclusion, the result of the bounds-test will indicate the presence or absence of a long run relationships among variables in the model. The ARDL model is linearly transformed to form the error correction model.

Justification of the Model

The choice of ARDL model in this study is primarily because of its dynamism, this implies that unlike other static model, ARDL model contains the combination of the lagged values of the dependent variable, the current and lagged values of the independent variables. That is the ARDL combines both the exogenous and endogenous variables, different from VAR model that is restricted to only endogenous variables. And since the study has interest on the behavior of the endogenous and exogenous variable in long run and short run, ARDL seems to be a perfect model for such analysis. As stated by Pesaran and Shin (1998), the ARDL model can as well be employed in studying variables with different order of integration.

Pre-Estimation Test/ Diagnostic Test

The Augmented Dickey Fuller (ADF) was employed for a unit root test for every variable employed in the analysis to test for stationarity. In order to test for serial correlation in the error term in the regression model, the Durbin Warson test was adopted. The R^2 which was gotten from the auxiliary regression was used to test for heteroscedasticity in other to verify the constancy of the variance in the error term between different time series of the same variable used for the analysis.

RESULTS AND DISCUSSION OF FINDINGS

Unit Root Test Result

Table 4.1: Result of Augmented Dickey-Fuller unit root test of the variables

Variable	Level Form		First Difference		p-values	Order of integration
	5% critical value	ADF test statistics	5% critical value	ADF test statistics		
EXGR	-2.951125	2.095092	-2.954021	-4.156411	0.9998	I(1)

IFLN	-3.595026	-4.293409	0.0115	–	–	–	I(0)
INPR	-2.951125	-2.348816	0.1634	-2.954021	-5.789784	0.0000	I(0)
INTR	-2.951125	-3.186646	0.0296	–	–	–	I(0)

Source: Eviews 9 Output Result of Augmented Dickey-Fuller unit root test of the variables

Hypothesis Testing

H0: $\delta = 0$ (the variables are non-stationary)

Decision Rule: reject H0 if the absolute value of ADF cal. > ADF tab.

The Augmented Dickey-Fuller test result for unit root test for the variables is shown in table 4.1. The result indicated that inflation rate and interest rate are stationary at level form considering that their ADF value is greater than their critical value at 5%. Exchange rate and insurance penetration rate was stationary only after first difference and are regarded to be integrated of order one.

Bound Test Analysis

Table 4.2: Bound Test Result Null hypothesis: No long run relationship exists

F-statistic	8.584133		
Critical Value Bounds			
Significance	 0 Bound	 1 Bound	Decision
10%	2.72	3.77	Cointegrated
5%	3.23	4.35	Cointegrated
2.5%	3.69	4.89	Cointegrated
1%	4.29	5.61	Cointegrated

Source: Eviews 9 Output for the Result of bound test (cointegration of the variables)

The bound test result in table 4.4 indicated that the F-statistic value is above the upper bound value of Pesaran test statistic. With the above result, the null hypothesis which states that there is no long run association among the variables in the model is to be rejected. This implies that the variables in the model has a long run relation.

Result of Model Estimation and Interpretation.

The presence of long relationship as indicated by the bound test stated above necessitated the estimation of the short run and long run cointegration form of the ARDL. The result of the estimate is presented thus;

Table 4.3: Result of ARDL Cointegration and Long-run Dependent Variable: INPR

ARDL Cointegrating And Long Run Form		
Dependent Variable: INPR		
Selected Model: ARDL(2, 1, 2, 0)		
Date: 11/05/20 Time: 11:33		
Sample: 1985 2019		

Included observations: 30				
Cointegrating Form				
Variable	Coefficient	Std. Error	t-Statistic	Prob.
D(INPR(-1))	0.096395	0.211633	2.818068	0.0103
D(INTR)	-0.111531	0.118166	-2.412113	0.0426
D(EXGR)	-0.055727	0.201894	-3.023942	0.0065
D(EXGR(-1))	-0.060270	0.104023	-2.055462	0.0525
D(IFLN)	-0.024740	0.002389	-1.983778	0.0605
CointEq(-1)	-0.591054	0.245178	-6.489387	0.0000
Cointeq = INPR – (0.1315*INTR1 – 0.0361*EXGR – 0.0130*IFLN1 + 0.0453)				
Long Run Coefficients				
Variable	Coefficient	Std. Error	t-Statistic	Prob.
INTR	-0.131515	0.008751	-3.601458	0.0017
EXGR	-0.036072	0.001916	-3.168556	0.0046
IFLN	-0.012979	0.001469	-2.027676	0.0355
C	0.045305	0.022660	1.999370	0.0487

Source: Authors computation from Eview 9

The result of the co-integrating and long run coefficient in table 4.3 above indicated that an increase in insurance penetration of the previous year by one percent will increase insurance penetration of the current year by 9%. The coefficient for interest rate (INTR) in the short run is -0.111531 with p-value of 0.0426 and -0.131515 in the long run with p-value of 0.0017. This implies that there is a negative relationship between interest rate and insurance penetration in the short run and in the long run. Therefore, a percentage increase in interest rate will result to an 11% percent decrease in insurance penetration in the short run, and 13% decrease in the long run. With p-value less than the 5% statistical level of significant, the result is accepted to be statistically significant.

However, the result for the control variables indicates that exchange rate has a coefficient of -0.055727 with p-value of 0.0065 in the short run, -0.060270 in the first year lag with p-value of 0.0065 and -0.036072 in the long run with p-value of 0.0046. This shows a negative relationship which indicates that if exchange rate should depreciate by 1%, insurance penetration will decrease by 5% in the short run, 6% in the first year lag and 3% in the long run. The results are statistically significant with p-values less than 5% significant level. Inflation rate has a negative relationship with a coefficient of -0.024740 with p-value of 0.0605 in the short run, and -0.012979 with p-value of 0.0555 in the long run. This implies that a percentage increase inflation rate will result to 2% decrease in insurance penetration, however the p-value is higher than the 5% significant level indicating that the result if not statistically significant. On the other hand the long coefficient implies that a percentage increase in inflation rate, will result to a percentage increase in insurance penetration the p value also indicates that the result is not significant. The co-integrating equation has a negative sign and a coefficient of -0.591054, with a p-value of 0.0001. This implies that about 59% of every movement into disequilibrium is corrected for within one period and the p-value indicates that the

From the result presented above, shows that the probability value of the Obs*R-square (0.1382) is greater coefficient is highly significant.

Post estimation test result.

Breusch-Godfrey Serial Correlation LM Test

This test employed the Breusch-Godfrey Serial Correlation LM Test to examine the tendency of serial correlation in the error term. The result is presented below

Table 4.4: Breusch-Godfrey Serial Correlation LM Test

Breusch-Godfrey Serial Correlation LM Test:			
F-statistic	0.190188	Prob. F(2,19)	0.8284
Obs*R-squared	0.588806	Prob. Chi-Square(2)	0.7450

Hypothesis:

$$H_0: \mu_1 = \mu_2 = \mu_3 \neq \dots \mu_p \neq 0$$

Decision Rule: Reject H_0 if the $F_{cal} < F_{tab}$, otherwise, do not reject. Or reject H_0 if the P-value is greater than 0.05.

The result presented above shows that the probability of the F-statistics which 0.8284 is greater than 0.05(5%). Also, the observations times R-squared (0.588806) is less than the chi-square P-value (0.7450). Hence, we reject the H_0 and conclude that the model has no serial correlation.

Heteroscedasticity Test

To show the consistencies in the error term from one period to another entails us to conduct the heteroscedasticity test. The Breusch-Pagan-Godfrey heteroscedasticity test was used to carry out this test. The result is shown in the table below. The null hypothesis is that the error term is homoscedastic.

Table 4.5: Heteroscedasticity result

Heteroskedasticity Test: Breusch-Pagan-Godfrey			
F-statistic	3.124764	Prob. F(8,21)	0.0173
Obs*R-squared	16.30379	Prob. Chi-Square(8)	0.1382
Scaled explained SS	12.18933	Prob. Chi-Square(8)	0.1430

Source: Eviews 9 Output for Heteroscedasticity Test

Hypothesis:

$$H_0: \sigma_1 = \sigma_2 = \sigma_3 \neq \dots \sigma_p = \theta \text{ (Homoscedastic)}$$

Decision Rule: Reject H_0 if the $F_{cal} < F_{tab}$, otherwise, do not reject. Or reject H_0 if the P-value is greater than 0.05.

than 0.05, this implies that the variance of the error term is constant. In that, we do not reject the null hypothesis of homoscedasticity and we conclude that the error term is constant overtime.

CONCLUSION AND POLICY RECOMMENDATION

This study illustrated a general overview of the insurance sector in Nigeria by providing a detailed analysis of the insurance penetration rate in Nigeria with interest rate as the key determinant and other macroeconomic indices used as control variable. With the urgent need to diversify the Nigerian economy coupled with the persistent fall in oil prices, insurance sector advancement has begun to generate a more cogent attention from many scholars, policy analysis and government bodies. The discovery of this analysis have created an improvement in the general understanding of the insurance penetration paradigm and the interest rate concept as an influencer of key sectorial development. The findings pinpointed the presence of a negative relationship between the insurance penetration rate in Nigeria and interest rate, both in the short run and long run. This can be attributed to economic theories which suggested that an increase in the cost of borrowing is most likely going to limit the rate of investment and output this will relatively hinder the demand for insurance services and negatively affect the penetration of the insurance sector in the economy. Other variables such as exchange rate and inflation rate indicated a negative relationship. However, the result for inflation rate indicated an insignificant effect in the short run and long run implying that inflation rate does not have an individual effect on insurance penetration. Based on the finding of this study, it became imperative to consider the following recommendations;

1. Monetary policy and other financial related policies should be structured and designed to stimulate a positive short run and long run effect on the development of key sectors in Nigerian including the insurance industry.
2. Prior to any adjustment in the monetary policies or any other economic policy, a detailed investigation should be carried out to ensure a favorable compliance of the short run and long run effect of adjusting such on the macroeconomic indices and insurance penetration.
3. Key players in the insurance sector should consider portfolio diversification to other economies with advanced financial system and more stable exchange rate with potential of generating higher returns.

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