IMPACT OF INSURANCE PREMIUM ON ECONOMIC GROWTH IN NIGERIA: LONG RUN APPROACH (1996-2023)

# Impact of Insurance Premium on Economic Growth in Nigeria; Long Run Approach (1996-2023)

Ezeaku, Faith Onyedikachi <sup>1</sup> & Okparaka Vincent Chukwuka, PhD <sup>2</sup>

<sup>1 & 2</sup> Department of Insurance and Risk Management, Enugu State University of Science and Technology (ESUT), Enugu State, Nigeria.

> <sup>1</sup> <u>ezeaku.faith@federalpolyoko.edu.ng;</u> +2347053102003 <sup>2</sup> <u>Vincent.Okparaka@esut.ng;</u> +234 (0) 8035985711

#### **Abstract**

**Research Objective:** This study examined the impact of insurance premiums on economic growth in Nigeria from 1996 to 2023. Specifically, it investigated the impact of both general insurance premiums and life insurance premiums on the country's economic growth.

**Methodology**: An econometric model was developed using the Ordinary Least Squares (OLS) estimation technique. Gross Domestic Product (GDP) was regressed on fire, accident, motor, marine, oil and gas, miscellaneous, and life insurance premiums.

**Findings**: The results showed a positive but insignificant relationship between GDP and life insurance premiums, fire insurance premiums, accident insurance premiums, and oil and gas insurance premiums. In contrast, motor insurance premiums, marine insurance premiums, and miscellaneous insurance premiums displayed a negative but insignificant relationship with GDP.

**Conclusion**: The study concluded that while insurance premiums, particularly life and general insurance premiums, show a positive relationship with economic growth, this impact is statistically insignificant. The findings suggest that the role of insurance premiums in fostering economic growth in Nigeria may need further strengthening.

**Recommendation**: It is recommended that individuals and organizations be encouraged to subscribe to both general and life insurance policies to support economic growth. Regulatory agencies should ensure the transparent and efficient management of premium income by insurers. Legislation, policy formation, and product innovation should be promoted to support the growth of fire insurance. Finally, the study advocates for greater government participation in the insurance sector to improve the operating environment and further enhance economic growth.

**Key words**: Insurance premium, General Insurance, Life Insurance, Economic Growth.

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The insurance sector is no longer viewed as a basic risk management tool, but rather as a complex factor that influences the evolution of economic processes (Akinlo, 2013). Savings are diverted to investment projects, which are the key driver of state economic growth and development, thanks to insurance. The evolution of the insurance market is influenced by the processes that take place in a country. On the other hand, several human activity processes, such as demographics, psychology, politics, and other elements, have an impact on insurance (Adeyele, 2016). The importance of the insurance industry in reducing unexpected and terrible events and thereby fostering economic growth cannot be overstated. The insurance sector contributes to economic growth both sectionals and geographically in both developed and developing countries (Ghosh, 2018). Because the insurance industry is intertwined with industries like manufacturing, transportation, agriculture, mining, petroleum, and trade on a local and worldwide level, its importance to everyday human activities has grown for people of all ages as all types of risks have increased.

The insurance sector serves as both a risk manager and a capital provider. Insurance, first and foremost, provides protection against the numerous business risks that develop in the economy (Philip, 2012; Din, et al., 2017). (Kenneth J. Arrow 2008) also claimed that insurance is a contract whereby one party undertakes to indemnify another against risk of loss, damage, or liability arising from an unknown or contingent event, while also serving as a significant mechanism for mobilizing savings and investing in economic growth.

The importance of the insurance industry in mitigating unforeseen and terrible events while also promoting economic growth cannot be overstated (Webb, Grace, & Skipper, 2015). The insurance sector has favorably contributed to economic progress in both developed and developing countries, both sectional and geographically (Barro, 1995; Olalekan & Akinlo, 2013; Zouhaier, 2014). Since the insurance industry is intertwined with other industries (such as manufacturing, agriculture, transportation, mining, trade, and petroleum) both locally and globally, and its importance to universal human and economic activities has grown at a rate of 2% per year in GDP over time as all types of risks have increased, the insurance industry has continued to grow at a rate of 2% per year in GDP (Taiwo, 2019). Several studies have found adequate evidence to imply that the insurance industry's expansion is linked to economic growth, and that insurance is becoming more important as a way for individuals or groups of individuals to manage their income risks (Osaka, 2017; Ward & Zurbruegg, 2000; Web, 2000; Ebitu, et al., 2012). The investments made by the insurance companies which contribute to the economic growth wouldn't be significant if not for premiums collected as a result of granting cover to the prospective insured from general insurance business premium or life assurance business premium (Onuoha 2024).



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General insurance, also known as non-life insurance, provides coverage for various risks excluding life. This includes insurance for property, liability, and health. Premiums are the amounts paid by policyholders to maintain their insurance coverage. General insurance helps businesses and individuals mitigate financial risks associated with accidents, natural disasters, theft, and other unforeseen events. This risk mitigation fosters stability and encourages investment and entrepreneurship. By providing coverage against losses, general insurance ensures that businesses can recover quickly from disruptions, maintaining productivity and contributing to economic stability. (Skipper, H. D., & Kwon, W. J. 2007). However, these funds are often invested in short-term financial instruments, such as government bonds and corporate securities, contributing to capital markets' liquidity and stability. The investment helps to finance public infrastructure and private sector projects, stimulating economic activity (Onuoha 2024)

Life insurance provides financial protection to beneficiaries upon the policyholder's death. Premiums are the amounts paid by policyholders for this coverage. Life insurance policies often serve as long-term savings instruments. Premiums collected by life insurance companies are invested in long-term assets like bonds, real estate, and stocks, promoting economic development. Life insurance companies are major institutional investors in capital markets. Their investments provide liquidity and stability to these markets, which is crucial for economic growth. (Outreville, J. F. 1990).

Numerous empirical studies confirm that financial intermediation plays a growth-supporting role. Research by King and Levine (1993) demonstrated that the banking sector significantly contributes to economic development, establishing a positive causal relationship between the banking sector and economic growth (Levine, 1997; Levine, Loayza, and Beck, 2000). Similarly, Levine and Zervos (1996) found that both the banking sector and stock exchanges have a major impact on economic growth. Within the financial system, insurance companies are increasingly important as financial intermediaries. Between 1998 and 2020, total world written real premiums grew by 50%, with life insurance premiums increasing by 52% and non-life insurance premiums by 49%, from US\$ 2.2 trillion to US\$ 4.3 trillion. Emerging markets, in particular, saw significantly faster real growth in their insurance sectors than industrialized countries (330% vs. 58% from 1998 to 2010), reflecting liberalization and financial integration following structural reforms. Despite the growing significance of the insurance industry, there is relatively little empirical research on its impact on economic growth. While this sector has been somewhat neglected by scholars, the insurance industry can contribute to economic growth in several ways. Beyond issuing insurance policies, insurance companies collect funds and transfer them to deficit economic units to finance real investments. Additionally, through complementarities with the banking sector and market shares, insurance can enhance the development of these financial systems. For instance, when combined with the banking sector, insurance can encourage bank



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loan approvals by reducing costs for companies in the capital market, thus increasing the demand for financial services (Grace and Rebello, 1993). Property insurance, by providing partial protection, can reduce credit risk and promote higher levels of lending, facilitating bank intermediation (Zou and Adams, 2006). Furthermore, the development of insurance, especially life insurance, can impact the stock market by channeling investment funds (savings) into stocks and bonds (USAID, 2006). Despite the evident role of the insurance industry as a financial intermediary and its potential contributions to economic growth, the sector remains underexplored in empirical research. This oversight leaves a gap in understanding the full extent of insurance's impact on economic development. Given the substantial growth in global insurance premiums and the increasing integration of insurance with other financial sectors, it is crucial to investigate how insurance influences economic growth, particularly in emerging markets. This study aims to address this gap by examining the relationship between insurance premiums—both life and non-life—and economic growth, thereby shedding light on the mechanisms through which the insurance industry can serve as a catalyst for economic development.

The broad objective of the study is to examine the impact of insurance premium on economic growth in Nigeria. Specifically the objectives seek to investigate the impact of general insurance premium and to determine the impact of life insurance premium on economic growth in Nigeria.

#### 2.0 REVIEW OF RELATED LITERATURE

#### 2.1 Conceptual Review

#### **Life Insurance Premium**

A life insurance premium is the amount of money that an individual or business must pay for a life insurance policy. The premium is typically paid monthly, quarterly, or annually, and it is determined by various factors such as the insured's age, health, lifestyle, and the type and amount of coverage. Life insurance premiums contribute to economic growth in Nigeria. Life insurance premiums play a critical role in fostering economic growth in Nigeria by facilitating capital accumulation, enhancing financial stability, promoting savings, managing risks, generating employment, contributing to government revenue, attracting foreign investment, and funding essential services like healthcare and education.

Concept of life insurance, according to Oana (2012), is defined as the protection of an individual and his family as well as the generation of income for a specific length of time. The National Insurance Commission (Naicom) Act of 2003 defines life insurance business as as the business of undertaking liability, the assumption of responsibility, or the obligation to pay a specified amount



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or amounts upon the death of the insured person or upon the happening of any contingency dependent on the termination or continuance of human life. This can include contracts for:

- 1. Whole life insurance
- 2. Term insurance
- 3. Endowment assurance
- 4. Annuities
- 5. Contracts that provide for the payment of money on the marriage or birth of a child

## **General Insurance Premium**

A general insurance premium is the amount of money paid by an individual or a business to an insurance company in exchange for coverage against specified risks and potential losses. General insurance typically covers non-life insurance policies such as health, motor, property, and liability insurance. General insurance helps businesses and individuals manage risks associated with unforeseen events such as natural disasters, accidents, or theft. This stability allows businesses to operate with confidence, fostering an environment conducive to investment and growth. Premiums collected by insurance companies are often invested in various financial instruments, including government bonds, stocks, and real estate. These investments contribute to capital formation, providing funds for infrastructure projects and other developmental activities that drive economic growth.

General insurance, also known as property and casualty insurance, encompasses all insurance policies other than life insurance. It provides financial protection against the risk of a contingent, uncertain loss of property, liability, and other risks (Dorfman, M. S. 2007).

The National Insurance Commission (NAICOM) Act of 2003 defines insurance businesses in Nigeria. According to the Act, General Insurance Business includes non-life insurance policies. Specifically, the Act delineates various classes of General Insurance Business, which includes but not limited to: fire Insurance Business, motor insurance business, marine insurance and aviation insurance business, oil and gas insurance business, miscellaneous insurance business and general accident insurance business.

# **Economic growth**

Economic growth refers to the increase in the production of goods and services in an economy over a certain period, typically measured by rise in a country's gross domestic product(GDP) (Jones, C.I 2016)

Economic growth is a complex, long-run phenomenon, subjected to constraints like: excessive rise of population, limited resources, inadequate infrastructure, inefficient utilization of resources,



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excessive governmental intervention, institutional and cultural models that make the increase difficult, etc. Economic growth is obtained by an efficient use of the available resources and by increasing the capacity of production of a country. It facilitates the redistribution of incomes between population and society. The cumulative effects, the small differences of the increase rates, become big for periods of one decade or more. It is easier to redistribute the income in a dynamic, growing society, than in a static one. There are situations when economic growth is confounded with economic fluctuations. The application of expansionist monetary and tax policies could lead to the elimination of recessionary gaps and to increasing the GDP beyond its potential level. Economic growth supposes the modification of the potential output, due to the modification of the offer of factors (labour and capital) or of the increase of the productivity of factors (output per input unit). (Allian Haller 2012)

## 2.2 Theoretical Framework

# 2.2.1 Endogenous growth theory

The endogenous growth theory was developed in the 1980s by Paul Romer as response to the limitations of the Solow-Swan Neoclassical growth model, which focused on exogenous factors like technological progress. The endogenous growth theory is the concept that economic growth is due to factors that are internal to the economy and not because of external ones. The theory is built on the idea that improvements in innovation, knowledge, and human capital lead to increased productivity, positively affecting the economic outlook.

Relevance of this theory should be noted that since the theory focus on internal factors such as innovation, human capital, and government policy is highly relevant to the impact of insurance premiums on economic growth. Insurance not only provides financial protection but also encourages investments in areas that drive growth, such as R&D, education, and new business creation. By understanding and leveraging these connections, policymakers and insurers can work together to foster an environment that supports sustained economic development.

# 2.3 Empirical Literature

Haiss and Sumegi (2018) examined the impact of insurance on economic growth, as measured by GDP, on a sample of 29 countries belonging to the European Economic Area. Countries used in the analysis are the EU-15, Norway, Switzerland, Iceland, the new EU member states and EU candidates (Turkey and Croatia). From the EU countries Lithuania was omitted due to lack of data and only few data were available for Croatia and Latvia. As dependent variable they use real GDP at constant year 2000 prices in constant 2000 US Dollars per employee while as explanatory variables they use gross premium income (three separate variables for total, non-life and life premium) calculated in constant year 2000 prices and US Dollars, physical capital stock

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at constant year 2000 prices in constant 2000 US Dollars per employee and human capital stock constructed as index using weighted employee education figures and R&D expenditure, interest (10-year government bond yields, secondary market, annual average) and inflation rate. They found positive impact of life insurance on GDP growth for the first group of countries. For the second group, they found a larger impact of non-life insurance. Additionally, their findings emphasize the impact of the real interest rate and the level of economic development of the insurance-growth nexus.

Adams (2015) explores the historical relation between banking, insurance and economic growth in Sweden in the period 1830-1998. Insurance development is measured by annual premiums for non-life and life insurance. They use time series data and econometric tests of causality. The results show that the development of banking, but not the insurance impact on economic growth during the XIX century until the twentieth century this relationship is in reverse. The results of the analysis indicate that the banking sector has a dominant influence on economic growth and demand for insurance, while the growth of insurance is more influenced by economic growth, than it contributes to the economic growth.

Empirical study of the Arena (2018) on the relationship between insurance and economic growth includes 56 countries (as developed and developing countries) for the period 1976-2004 year. Insurance premiums are used as proxies of total and life and non-life insurance activity separately. Results show positive and significant effect of life and non-life insurance on economic growth. Impact of life insurance on economic growth is the high only for developed countries. In the case of non-life insurance, its impact is significant in both developed and developing countries, but this impact is greater in developed countries than in the developing countries.

Arena (2018) found that both life and nonlife insurance have a large and favorable impact on GDP growth in his study. He also highlighted a number of factors that influence insurance, including openness, inflation, government consumption, human capital, and changes in terms of trade. The impact of private credits and stock market turnover, which were included in the study, could not be shown. According to Feyen, Lester, and Rocha (2011), per capita income, population size and density, demographic structure, income distribution, the size of the public pension system, state ownership of insurance companies, the availability of private credit, and religion all influence life sector premiums. They also illustrate that policy issues can have an impact on the insurance sector's development.

Kugler (2016) examined the relationship between the size of insurance markets and economic growth in the UK for the period 1966-2017 on the long-term insurance, and for the period 1971-2017 on general insurance. For most of the variables with at least 5% level of significance, their research found that there is a long-term integration between development in insurance

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market size and economic growth. Compared with Ward and Zurbruegg. Which as a measure of the activity of insurance use the total premium; in this study the authors use disaggregated data to measure market size. The research found that there is a long-term causality between the growth of insurance market and economic growth for eight of the nine classes of insurance (except pecuniary loss insurance). Causality in the short term there is in life insurance and insurance against pecuniary loss to economic growth. There is evidence of bilateral long-term relation between economic growth and ensuring the three categories of insurance, with greater impact by the economic growth of the insurance on growth than the growth impact of insurance on economic growth.

Akinlo (2014) conducted a panel analysis that looked at the association between insurance and economic growth in Sub-Saharan Africa from 1986 to 2011. The estimate methods used were Pooled OLS, Fixed Effect Model, and Generalized Method of Moment Panel Model. Insurance has a favorable and significant impact on economic growth in Sub-Saharan Africa, according to the results of the dynamic panel data calculations. This demonstrates that premiums contribute to economic growth in Sub-Saharan Africa, implying that a well-developed insurance industry is essential for economic development since it provides long-term investments for economic growth while also boosting risk-taking abilities.

### 3.0 METHODOLOGY

#### 3.1 Theoretical Framework

This study is anchored on Endogenous Growth Theory postulated by Romer (1986) the theory focus on internal factors such as innovation, human capital, and government policy which is highly relevant to the impact of general insurance premiums on economic growth. Insurance not only provides financial protection but also encourages investments in areas that drive growth, such as education and new business creation. By understanding and leveraging these connections, policymakers and insurers can work together to foster an environment that supports sustained economic development.

#### 3.2 Model Specification

This study on the impact of insurance premium on economic growth in Nigeria: long run approach shall follow the model specification approach adopted in Haiss and Sumegi (2018) examined the impact of insurance on economic growth in Nigeria.

The model of this study is thus

GDP = f (FIRE, ACCI, MOTO, MARI, OILG, MISC, LIFE).....(3.1)

The econometric form of the model is represented as



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GDP<sub>t</sub> =  $\beta_1$  +  $\beta_2$ LFIRE<sub>t</sub> + $\beta_3$ LACCI<sub>t</sub> +  $\beta_4$ LMOTO<sub>t</sub> +  $\beta_5$ LMARI<sub>t</sub> +  $\beta_6$ LOILG<sub>t</sub> +  $\beta_7$ LMISC<sub>t</sub> +  $\beta_8$ LLIFE<sub>t</sub>  $\mu_t$ .....(3.2)

Where:

LGDP = Log of Gross Domestic Product Growth Rate

LACCI = Log of Accident Insurance Premium

LMOTO = Log of Motor Insurance Premium

LMARI = Log of Marine Insurance Premium

OILG = Log of Oil and Gas Insurance Premium

LMISC = Log of Miscellaneous Insurance premium

LLIBS = Log of Life Insurance Business premium

 $\beta_1$ = intercept;  $\beta_2$ ,  $\beta_3$ ,  $\beta_4$ ,  $\beta_5$   $\beta_6$   $\beta_7$  and  $\beta_8$  are the coefficients of each variable of the regression whereas  $\mu$  represents the error term

## 4.0 PRESENTATION AND ANALYSIS OF RESULTS

The result of the ordinary least square (OLS) regression model is presented in this chapter. The analysis of the result includes; descriptive statistics, unit root, co-integration test. A multiple regression model was estimated to ascertain the impact of insurance premium and economic growth in Nigeria: long run Approach.

## **4.1 Descriptive Statistics**

Table 4.1: Descriptive statistic of variables used in the study

|           | LGDP      | LFIRE     | LACCI    | LMOTO    | LMARI    | LOILG     | LMISC     | LLIFE     |
|-----------|-----------|-----------|----------|----------|----------|-----------|-----------|-----------|
| Mean      | 11.43053  | 10.44994  | 10.36595 | 10.77465 | 10.09367 | 11.02182  | 9.750762  | 11.61168  |
| Median    | 11.49015  | 10.48340  | 10.29176 | 10.70326 | 9.994341 | 11.03391  | 9.769801  | 11.57534  |
| Maximum   | 11.94634  | 11.04525  | 10.95836 | 11.10114 | 10.88046 | 11.77946  | 10.48939  | 12.60637  |
| Minimum   | 10.57536  | 9.767376  | 10.05227 | 10.56363 | 9.597411 | 9.865214  | 8.966497  | 10.33318  |
| Std. Dev. | 0.445033  | 0.402817  | 0.241887 | 0.178713 | 0.428927 | 0.544053  | 0.481083  | 0.764693  |
| Skewness  | -0.545635 | -0.175554 | 0.969741 | 0.711292 | 0.714134 | -0.413055 | -0.160176 | -0.182096 |
| Kurtosis  | 2.119798  | 1.730555  | 3.399909 | 2.041090 | 2.187993 | 2.454187  | 1.829582  | 1.727561  |
|           |           |           |          |          |          |           |           |           |



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| Jarque-Bera  | 1.310419 | 1.156512 | 2.614346 | 1.962169 | 1.799536 | 0.653580 | 0.981669 | 1.167825 |
|--------------|----------|----------|----------|----------|----------|----------|----------|----------|
| Probability  | 0.519333 | 0.560876 | 0.270584 | 0.374904 | 0.406664 | 0.721235 | 0.612115 | 0.557712 |
|              |          |          |          |          |          |          |          |          |
| Sum          | 182.8885 | 167.1990 | 165.8553 | 172.3944 | 161.4986 | 176.3492 | 156.0122 | 185.7869 |
| Sum Sq. Dev. | 2.970819 | 2.433927 | 0.877641 | 0.479076 | 2.759670 | 4.439910 | 3.471614 | 8.771336 |
|              |          |          |          |          |          |          |          |          |
| Observations | 16       | 16       | 16       | 16       | 16       | 16       | 16       | 16       |

Source: Authors Compilation using Eviews 9.

Table 4.1 shows the descriptive statistics of the variables used in the study. It could be observed that log of life insurance business recorded the highest mean value followed by log of gross domestic product, log of oil and gas insurance, log of motor insurance, log of fire insurance, log of accident insurance. However, log of marine and miscellaneous insurance recorded the least mean value. Also, LGDP, LFIRE, LOILG, LMISC and LLIFE show evidence of negative skewness (skewed to the left) while LACCI, LMOTO AND LMARI has positive skewness (skewed to the right). Lastly, the number of observations is 16 and this is large enough to solve the problem of loss of degrees of freedom.

# 4.2 Analysis of Unit Root and Co-Integration Result

Conventionally, testing for unit roots precedes that of co-integration. To test for the unit root, we employ Augmented Dickey-Fuller (ADF) test. The result is shown in the table below.

**Table 4.2** 

| Variable | Variable at level form |   |                  | Variable at difference form |   |          | Order of integration |
|----------|------------------------|---|------------------|-----------------------------|---|----------|----------------------|
| Variable | ADF Stat. Lag 5%       |   | ADF Stat. Lag 5% |                             |   |          |                      |
|          | -3.083244              | 0 | -2.97626         | -3.293896                   | 0 | -2.98103 | 1 (0)                |
| LGDP     |                        |   | 3                |                             |   | 8        |                      |
|          | -2.309786              | 1 | -2.98103         | -6.468652                   | 0 | -2.98103 | 1 (1)                |
| LFIRE    |                        |   | 8                |                             |   | 8        |                      |

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|          | -1.450135 | 0 | 2.9762   |           | 0  | -2.98103 | 1(1)  |
|----------|-----------|---|----------|-----------|----|----------|-------|
| LACCI    | 1.130133  |   | 63       | -5.150433 |    | 8        | 1 (1) |
|          |           | 0 | -2.97626 | -4.407250 | 0  | -2.98103 | 1(1)  |
| LMOTO    | -2.356645 |   | 3        |           |    | 8        | , ,   |
|          |           | 0 | -2.97626 | -5.929353 | 0  | -2.98103 | 1(1)  |
| LMARI    | -0.551908 |   | 3        |           |    | 8        |       |
|          | -1.980142 | 0 | -3.08100 |           | 0  | -3.09889 | 1(1)  |
|          |           |   | 2        |           |    | 6        |       |
|          |           |   |          |           |    |          |       |
|          |           |   |          | -8.143983 |    |          |       |
|          |           |   |          |           |    |          |       |
| LOIGA    |           |   |          |           |    |          |       |
|          | -2.165612 | 0 | -2.97626 |           | 0  | -2.98103 | 1(1)  |
| LMISC    |           |   | 3        | -7.442754 |    | 8        |       |
| LLIFE    | -3.174889 | 0 | -3.06558 | -5.752556 | 0  | -3.08100 | 1(0)  |
|          |           |   | 5        |           |    | 2        |       |
| RESIDUAL | -4.149729 | 0 | -1.96627 | NA        | NA | NA       | 1(0)  |
|          |           |   | 0        |           |    |          |       |

Source: Authors Compilation using Eviews 9.

The result reveals that all the variables are integrated of order one 1(1) though log of gross domestic product and log of life insurance attain stationary in level and first difference respectively. In other words, all the variables have unit roots, but stationary after being differenced. This is because the ADF statistics for each of the variables are less than the critical levels at 5%. In other words, the null hypothesis for unit root is accepted for all the variables at the level form. On the other hand, the ADF statistics for each of the variables when differenced are higher than their critical values at 5% which implies that the null hypothesis of unit root is rejected. However, we proceeded to examine their long-run equilibrium relationship using co-integration ADF (CADF) test. As already shown in table 4.1 above, the error term (residual) is stationary at its level form. This implies that there exists a long-run relationship between dependent and independent variables.

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**Table 4.4** 



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Dependent Variable: LGDP

Method: Least Squares

Date: 08/24/24 Time: 02:56 Sample (adjusted): 2008 2023

Included observations: 16 after adjustments

| Variable            | Coefficient | Std. Error            | t-Statistic | Prob.    |  |
|---------------------|-------------|-----------------------|-------------|----------|--|
|                     |             |                       |             |          |  |
| С                   | 6.794987    | 2.783689              | 2.441001    | 0.0405   |  |
| LFIRE               | 0.015658    | 0.396597              | 0.039481    | 0.9695   |  |
| LACCI               | 0.246969    | 0.306454              | 0.805892    | 0.4436   |  |
| LMOTO               | -0.232793   | 0.241225 -0.965043    |             | 0.3628   |  |
| LMARI               | -0.247134   | 0.123024              | -2.008822   | 0.0794   |  |
| LOILG               | 0.134012    | 0.153713              | 0.871834    | 0.4087   |  |
| LMISC               | -0.264020   | 0.117600              | -2.245079   | 0.0550   |  |
| LLIFE               | 0.689990    | 0.233281              | 2.957757    | 0.0182   |  |
|                     |             |                       |             |          |  |
| R-squared           | 0.986648    | Mean depe             | ndent var   | 11.43053 |  |
| Adjusted R-squared  | 0.974964    | S.D. dependent var    |             | 0.445033 |  |
| rajusted it squared | 0.774704    | S.D. depen            | dent var    | -2.16193 |  |
| S.E. of regression  | 0.070416    | Akaike info criterion |             | -2.10193 |  |
| _                   |             |                       |             | -1.77563 |  |
| Sum squared resid   | 0.039668    | Schwarz criterion     |             | 8        |  |
|                     |             |                       |             | -2.14215 |  |
| Log likelihood      | 25.29546    | Hannan-Qu             | 1           |          |  |



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F-statistic 84.44900 Durbin-Watson stat 2.198326

Prob(F-statistic) 0.000001

Source: Authors Compilation using Eviews 9.

# Coefficient of Determination (R<sup>2</sup>)

This measures the goodness of fit of the regression model. It shows how the variation in the dependent is explained by explanatory variables, from the table,  $R^2 = 0.986648$ . This implies that about 99% variation in the gross domestic product is explained by the explanatory variables.

## 4.5 Discussion of Results and Evaluation Based On Economic Criteria

The OLS regression applied a Log-Linear Model in order to determine the relative change in the dependent variable from a relative change in each of the explanatory variables. The result established a positive but insignificant relationship between fire insurance premium and gross domestic product. This has been found to be consistent with the theory. This implies that fire insurance premium is capable of creating a positive effect on the economic growth of Nigeria as a risk diversification device. It provides a medium through which lost/damaged facilities and infrastructure can be replaced, and lost incomes as a result of fire outbreaks and damage reimbursed and replaced. The replacement of these lost and damaged facilities together with the reinstatement of individuals and organizations who suffered the loss adds to the growth of the economy.

Again, there exists a positive but insignificant relationship between accident insurance premium and gross domestic product. This is consistent with the theory. This implies that improvement in accident insurance premium will help the health sector and medical services as individual premium which cover medical expenses, contributing to the health sector' output and GDP.

Also, there is a negative but insignificant relationship between motor insurance and gross domestic product. This is in inconsistent with the theory. This implies that there is need to increase in motor insurance covers as it will enable vehicle owners to use their vehicle with reduced risk which will facilitate trade and commerce.

However, there exist a negative but insignificant relationship between marine insurance and gross domestic product. This is inconsistent with the theory. This implies that there is need to improve in marine insurance cover as it will help support global trade and business resilience as well.

Hence, there is a positive but insignificant relationship between oil and gas and gross domestic product. This is consistent with the theory. This suggest that oil and gas insurance cover is vital

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because it helps in supporting energy production, investment and asset protection while supporting government revenue and fostering economic resilience.

Also, there is a negative but significant relationship between miscellaneous insurance premium and gross domestic product. This is inconsistent with the theory. This implies that there is need to maintain financial stability by protecting against unexpected loss and reduce likelihood of business failure in the economy.

Finally, there is a positive but significant relationship between life insurance premium and gross domestic product. This is consistent with the theory. This implies that increase in life insurance premium will contribute to capital formation and economic growth through saving and investment.

## 5.0 SUMMARY OF FINDINGS, CONCLUSION AND RECOMMENDATIONS

The result established a positive and insignificant relationship among of fire insurance premium, accident insurance premium and oil and gas insurance premium and a negative and insignificant relationship among motor insurance premium, marine insurance premium and miscellaneous insurance premium also positively and significant in life insurance premium. The reason for this negative and insignificant relationship among motor, marine and miscellaneous insurance premium is that the present economic performance of the country is not encouraging to both household, firms and government hence the economic agents turned risk averse. Hence, individuals are expected to take up new or renew old insurance policies and growing premium pool will lead to decrease demand for those insurance policies which provide more liquidity to the insurance industry for investment which enhances economic growth. The study concludes that there exist a positive but insignificant impact on life, fire, accident and oil and gas insurance premium and a negative and insignificant impact on motor, marine and miscellaneous insurance premium in Nigeria. Though there exist a long run relationship between dependent variable and independent variables. Based on the finding, of the study, the following recommendations are made: Individuals and organizations should be encouraged to subscribe to general and life insurance policies to promote economic growth. Also, since insurance premium income plays a significant role in economic growth, regulatory agencies should oversee the efficient and transparent management of premium income by insurers. Suitable legislation, policy formation and product innovation should be encouraged to promote fire insurance. Finally, there is a need for effective government participation in insurance operations to enable a better operating environment for the industry and aid economic growth.

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