
Insurance Sector Development and Economic Growth: Empirical Analysis from Nigeria

Abstract

This study evaluated the relationship of insurance sector development with the growth of Nigerian economy between 2003 and 2020. The study analyzed the time series data by employing the Autoregressive Distributed Lag Model. Thus, findings indicated that insurance sector productivity was a statistically significant determinant of economic growth with coefficient 0.8092 (p-value = 0.0250<0.05); hence, the study revealed that Nigerian economic growth was strongly and positively promoted by the productivity of the insurance sector. Also, insurance sector claims expenditure was revealed as a weak promoter of economic growth with coefficient 0.0165(p-value = 0.6860>0.05) while insurance sector total asset was indicated as a weak and negative predictor of the Nigerian economy with coefficient -0.0919(p-value = 0.4180<0.05). Accordingly, the study concluded that the development that took place in the insurance sector during the scope of this study significantly promoted growth in the Nigerian economy and consequently recommended that the Nigerian government should consider insurance sector as one of those sectors that are critical to Nigerian economic growth, and should be so treated by according it same attention with banking sector and other critical sectors of the economy.

Key Words: Insurance sector, Economic growth, Total Asset Value, Insurance Sector productivity, Total Claims Expenditure.

1.0 Introduction

Insurance companies belong to the non-banking sector and they play the role of risk management. Insurance, in its form, provides protection against the many business risks that often occur in the economy. The primary purpose of an insurance firm is to manage risk. This is so because risk is pervasive and not detachable from the individual's social and business lifestyles. It is on this premise that insurance firms were founded with the sole purpose of restoring the insured to an original position prior to the occurrence of the risk (Iyodo, Samuel & Inyada, 2018). In Nigeria, the insurance sector is a massive industry that protects the wealth of individuals and businesses. It is one of the financial industry's cornerstones in Nigeria (Ukpong & Acha, 2017). The Nigerian insurance industry has grown steadily over the last decade, as evidenced by total premiums, which have risen from around N101 billion in 2007 to N380 billion in 2016, representing a nearly 300 percent increase in just ten years. By 2024, the Nigerian insurance market is predicted to grow to N1 trillion (Nwafor, 2017).

In the light of this projection, it is apt to state that the importance of an insurance firm cannot be overstated in that it is the foundation for mitigating unexpected risks in businesses in a developing country such as Nigeria. Despite the federal government's implementation of compulsory insurance for all Nigerians, most insurance companies do not instils into Nigerians the confidence to invest in a business without fears of losing money (Fashagba, 2018). Nwafor (2017) opines that the insurance sector in Nigeria, like other insurance industry throughout the world, has grown in quantitative importance as a result of its ability to handle growing risks and uncertainties in the country. As part of the liberalization of financial systems, globalization, and agglomeration of financial markets, the insurance sector's economic importance has increased. With a total insurance premium of over N380 billion, the insurance industry's total premium has reached a new record (Onuoha, 2017). This, according to Nwafor (2017) can be ascribed to the growing requirement for enterprises in Nigeria to manage risk and disaster as a result of the country's socio-political condition. By 2018, the total insurance premium in Nigeria was N400 billion while it increased to N413 billion and N508 billion respectively from 2019 to 2021; also, out of N508 billion premium received in 2021, insurance sector paid N224 billion claim, representing about 44% of the premium received (Nwoji, 2022).

Agbamuche (2012), cited by Okparaka (2018), agreed that insurance sub-sector in Nigeria is critical to supporting the Nigerian economy and plays a critical role in the country as a whole. Agbamuche (2012) went on to say that the industry mobilizes funds and channels them into productive investments, as well as acting as a stimulus for economic growth and accelerating the structural reform process with quality. Essentially insurance sub-sector render services which include general protection from uncertainty that ordinarily dominate life, resulting in liabilities and financial loss. As required in section 25 of the Insurance Act of 2003, the collected insurance premium and source of insurance fund are not kept inactive, but are instead invested in the stock market, including other investment outlets (Agbamuche, 2012). Also, due to the increasing rate at which insurance sub-sector if found important s well as the expanding scale in its interconnectivity other financial sectors, Oyedotun and Adesina (2015) asserted that policymakers and supervisors should pay increasing attention to the developing effects of insurance companies in terms of growing and stabilizing economy. According to Brainard (2008), from the point of views of developed and emerging nations, the financial sector has witnessed accelerated growth in the act of financial liberalization and integration in recent decades, and this thus raises concerns about its influence on economic growth.

A successful insurance business, according to Vayanos and Hammound (2006), is not just indicative of an effective financial service sector, but equally a critical tool for gauging a flourishing economy. In agreement with the above, Nwafor (2019) asserted that the insurance industry is a significant part of

Nigeria's economy. Insurance also plays an essential role, according to Saunders and Cornett (2008), because it performs a variety of worthy economic services that are distinct from those performed by other financial agents.

Kaya and Beser (2020) argue that revenues received in forms of insurance premiums are critical for the growth and diversification of an economy. According to authors, the premiums paid to insurance companies create savings sources, which supply funds for capital markets. The insurance industry is essential because it provides money for countries' finance markets. By transferring these assets into financial systems, insurance firms mobilize funds with the goal of shielding individuals and businesses from future dangers by giving guarantee of receiving compensation for losses suffered by individuals and business firms. In economically robust countries, premiums earned in the insurance sector cover a major portion of the economy's funding needs. Because the premiums received from all types of insurance are long-term funds, they will be used to make investments (Kaya & Beser, 2020). To this purpose, the relationship between and economic growth has been studied extensively throughout the years, although the results have been mixed. However, if it is true that insurance is part of the core non-banking financial institutions that pool fund for investment in the interest of the wellbeing of a nation as widely claimed in the literature, it is imperative to investigate subject its effect on economic growth to empirical investigation.

The relationship between Nigerian insurance industry and economic growth has become an attractive area to so many researchers over the years, to the extent that many studies with divergent findings abound in the literature with respect to this subject matter. For instance, while Ezu, Okoye and Ogbogu (2020), Ul Din, Abu-Bakar and Regupathi (2017), Adetunji, Nwude and Udeh (2018), Iyodo, Samuel and Inyada (2019), Etale (2019), Oyedotun and Adesina (2015) reported that insurance industry had positive effect in stimulating the growth of an economy, other authors deviated from the foregoing findings and reported that insurance industry had inverse relationship with economic growth (Nkoroa, Ikue-John & Nwantah, 2019; Nwafor, 2019). Yet there are authors whose findings lie in between the two extremes as they reported mixture of direct and negative association between insurance industry and Nigerian economic growth (Nwani & Omankhanlen, 2019; Nkoroa, Ikue-John & Nwantah, 2019). Consequently, it can be inferred tentatively that there is presently lack of consensus in the literature concerning the direction of the nature of the association between insurance industry and the growth of Nigerian economy.

A painstaking review of the existing studies showed that majority of the authors excessively focused on using premiums and investment of insurance sector as proxies for insurance performance, thereby ignoring other equally important indicators of insurance performance and development such as insurance sector total assets, insurance claims and Gross Domestic Product of the insurance sector. Although Nkoroa, Ikue-John and Nwantah (2019) considered insurance claims expenditures in their study, the scope of the study was limited to 2015. In addition, the study of Okoye and Ogbogu (2020) was the only one that incorporated total insurance assets into their study despite the importance of this variable in the operational development of insurance business, even at that, the scope of the study was equally not up to date as it terminated in 2018. In addition, it was obvious from the reviewed literature that majority of the existing studies were not up to date in their data collection and analysis; this is because most recent studies in the literature terminated data collection in 2018 (e.g Etale & Edoumiekumo, 2020; Ezu, Okoye & Ogbogu, 2020).

Thus, unless an up to date data are collected and analyzed, and other performance indicators of insurance industry are empirically studied, there cannot be concrete and reliable evidence in respect to the association between insurance development in Nigeria and economic growth; as such, policy makers, academia insurance practitioners cannot be properly and accordingly guided. In the light of the prevalent aforementioned gaps in the literature, this study becomes imperative so as to throw light into the lack of consensus in the literature by subjecting often ignored insurance development indicators like insurance

total assets, insurance productivity, total claims expenditure into empirical investigation so as to concretely establish the effect of insurance development on the Nigerian economic growth. Furthermore, the present study also collects data up to 2020 so as bridge the identified scope gap in the literature.
This study aims to empirically investigate the effect of insurance sector development on the growth of Nigerian economic between 2003 and 2020. The base year chosen in this study was due to the fact that the latest Act regulating the insurance business in Nigeria was signed into law in 2003, with the expectation that such Act would strengthened the insurance sector and promote its development to the level favourably competing with foreign counterparts. Apart from the introductory section, section two deals with the empirical review of literature; section three is the methodology, section four is data analysis and discussion of findings while section five is conclusion and recommendations from the study.

2.0 Literature Review

2.1 Conceptual Review

2.1.1 Insurance

Insurance, according to Etale and Edoumiekumo (2020), is the business of guiding against the risk of unknowns and minimizing the risk for the both insured party and third parties. Insurance is a business that protects individuals and businesses against the occurrence of an uncertain event in the future. According to Etale and Edoumiekumo (2020), the provision of coverage from unexpected occurrences can lead to payments of claims by the insurer and in exchange for which premiums are received from the insured. Insurers collect premiums from their customers, which serves as a source of gross capital formation. In this vein, Nwafor (2019) points out that insurance contracts involve small, regular payments in exchange for protection against unpredictable losses that are also potentially severe. Nwafor (2019) concludes that this, among other things, helps to avoid extreme and costly disasters and facilitates commercial lending; and that insurance, which is convenience, enables entrepreneurs to assume higher risks while engaging in activities that produce higher return than they would have achieved without insurance, and this encourages higher productivity.

Ajayi (2000) believes that insurance means a guarantee of repayment in the event of a loss, provided by an insurance firm to individuals or businesses concerned about risks. As a result, Ezu, Okoye, and Ogbogu (2020) state that presently, insurance is a necessary component of most countries' economies globally. They feel that without insurance coverage, the private operators in the commercial sector would be unable to function without insurance coverage; this is because, according to these researchers, insurance allows firms to function more cost effectively by providing a risk transfer mechanism via which third parties bear risks associated with business activity. In support of the preceding point, Nduka (2002) asserts that insurance is a system in which loss payment responsibility is transferred from one party to another, noting that in the modern world economics, the significance of insurance is undeniable and such has been noted for many centuries, and this serves as the as the basic ways through which disaster occurring to an individual is spread to other communities, allowing great catastrophes to be lessened and repaired.

In addition, according to Adebisi (2006), referenced by Oyedotun and Adesina (2015), insurance is a complex subject involving economic and social mechanisms for the management of risks to life and property. By nature, it is social, Adebisi (2006) explains, because it symbolizes the cooperation of many individuals for mutual gain by combining to decrease the consequences of similar risks. The insurance industry is booming as new areas of risk are discovered and as new insurance packages are created to cover more and more dangers. To Olasehinde (2003), cited in Ogunlokun and Adeleke (2018), insurance is a contractual agreement in which a party, known as the insurer, gives promises to compensate another party, known as the insured, with specified amount of money should anything happens that causes loss of

money on the part of the insured. The insured's liability for such losses is subsequently shifted to the insurer, who then charges the insured to pay insurance premiums in exchange.

2.1.2 Insurance Premiums

To Kaya and Beser (2020, insurance premiums implies a regular sum paid by the insured to the insurer which forms the basis of arriving at the amount payable by the insurer to the insured in case the insured suffer losses from the insured perils. As a result, they believe that the most important thing for an insurer is to get the insurance premium paid on time, and that calculating the premium, which is normally paid in money, is a technical issue rather than a legal one. Furthermore, Onyele and Ariwa (2019) state that an insurance premium is a set amount paid by an insured in exchange for protection against financial loss. By implication, the amount which is due from the insured to the insurer for the promise of financial assurance is referred to as the insurance premium. Because insurance premiums represent a pool of funds from which claims are paid to the insured, Okonkwo and Eche (2019) suggest that what is paid to the insurer in form of premium for insurance coverage must be adequate to cover future claims made on the risks pooled together, as well as expenditure such as insurance commissions; moreover, the premium should be affordable to the insured, such that willingly, the insured will be willing to pay (Adetunji, Nwude, & Udeh, 2018).

2.1.3 Insurance Productivity

One of the compelling imperatives for Nigeria's economic development and growth is a strong and competitive insurance industry. However, to adequately stimulate the economic growth of Nigeria, insurance, according to Oyinlola (2006), cited in Elendu (2013) functions in the following ways;

i. Investment

Insurance business has traditionally had a favorable role in boosting investment activity across the board, including capital, real estate, and money markets. Without the protection from insurance, economy in the preset dispensation can progress while economy of any nation cannot flourish in the absence of both local and foreign investments. In all the sectors of the economy, insurance essentially stimulate investment of all types in different sectors of the economy by both facilitating movement of financial resources between deficit and surplus units in the economy.

ii. Gross Premium Income Generation

In the form of accumulated premiums, the insurance business has the prospect to mobilize financial resources which may be used to stimulate economic growth.

iii. Outflow of Resources

The insurance industry contributes to the economy by reducing outflows of resources from one country by keeping premiums realized by both insurance and reinsurance businesses within the country, thereby resulting in a favourable influence on the balance of payments. In addition, the country's earnings from the invisible trades are derived via international market retrocession.

iv. Employment Generation

With about 49 insurance companies, about 250 insurance brokers, twenty (20) loss adjusters, and over 3500 agents, the insurance business appears to be booming. As a result, the industry has employed a sizable number of people, so contributing to the creation of jobs and the reduction of poverty in the country. The industry employs over 89000 people, according to estimates.

v. Claims Statement to the Insured

Due to the level of insecurity ravaging country, one can just imagine how bad things would have been if there had been no insurance. The explosions in the military cantonment in Ikeja on January 27, 2002, and the Eagles Square in Abuja on May 27, 2011, respectively, resulted in the deaths of thousands of people, significant property damage, and disruption of commercial activities. Many of the victims (both businesses and individuals) were covered by insurance against fire and other risks. More than #5.1 billion

in insured claims arose from boom blasts and numerous airline disasters across the country, all of which were completed by the insured. Insurers responded quickly to this terrible event by compensating the insured after making the appropriate adjustments.

vi. Foreign Investment

The insurance market is truly worldwide, especially when it comes to big risks. In most cases, the risk insured in one nation is not entirely retained in another. As a result, substantial risks that could result in losses are re-insured and ceded over the country's borders. In addition, Iwunze (2021) notes that there are indications that the insurance sector has shaken off the influence of COVID-19 on its performance by recording 15.7 percent year-on-year growth in contribution to gross domestic product, GDP, in the second quarter of 2021. She adds that the industry's revenue increased significantly in the first half of 2021, with a 23.2 percent increase in Gross Premium Written from N176.4 billion in the same period of 2020 to N217.3 billion in 2021. As a result of the foregoing, this study is necessary to empirically establish the contribution of the insurance sector to the development of the Nigerian economy. As a result, one of the factors assessed in this study is insurance productivity in order to assess the impact of insurance development on the growth of the Nigerian economy.

2.1.4 Insurance Assets

The insurance industry's entire assets were valued at N2.13 trillion at the end of 2021, with income from gross premium standing at about N630.36 billion in 2020 and a net claim of N238.05 billion. As a result, from June 2020 to September 2021, the industry's assets increased by 16 percent. From N1.8 trillion to N2.09 billion, it has increased (Otaru, 2022). Furthermore, according to the Central Bank of Nigeria (2018), the Nigeria Insurance Sector Fixed Assets statistics in June 2018 was N250,698.042. This represents an increase over the previous month's figure of N240,159.329, with an average of N97,587.975 from March 2008 to June 2018. The insurance assets reached an all-time high of 261,010.213 in December 2017 and a record low of 42,948.108 in September 2013. To this end, Nigeria Insurance Sector Assets remains active status in the financial sector. Consequently, in this study, it becomes imperative to measure insurance assets in relation to economic growth so as to establish the nature of its relationship with growth of Nigerian economy.

2.1.5 Insurance claims

Nigeria Insurance gross claims were reported at N148,345.100 in 2017, according to the National Insurance Commission (2018). This implies upscale from the position in the previous year which stood at 145,838.340. From December 2009 to December 2017, Nigerian insurance gross claims averaged N111,169.290. The total claims spending reached a new high of N148,345.100 in 2017 and a new low of N99,156.700 in 2014.

2.1.6 Economic Growth

Economic growth, according to Nwafor (2019, citing Hardwick (2002), is defined as a rise in the productive potential of an economy as evidenced by a continued increase in the real national income over a number of years. Increase the quantity and quality of production factors, such as laburr and capital, can help to boost growth. He goes on to say that economic expansion has a lot of advantages, including a higher standard of life and a lower poverty rate. Growth, on the other side, might come with a price tag, such as technological unemployment, rapid depletion of nonrenewable resources, and negative externalities. Economic growth, according to Ogunlokun and Adeleke (2020), is a process in which an economy's drivers improve through time, resulting in an increase in national income levels. Hence, in this study, economic growth is one of the variables to be measured and the study agrees with the foregoing submission of Etale and Edoumiekumo (2020) and measures economic growth using real Gross Domestic Product of Nigerian Economy as this is the most popular metric of economic growth found in the literature.

2.1.6 Insurance sector and Economic Growth: The Nexus

According to Skipper (1997), the insurance market activities enhances the mobilization of new capital, financial stability, assisting trade, assisting in loss mitigation, and facilitating distribution of domestic wealth in a more efficient and fair manner. The expansion of the life insurance market reflects significant efforts made by the insurance industry. According to Billah (2013), various questions have been raised about how the life insurance package affects or favorably effects an economy's growth. As a result, this scholar agrees that the funds pooled by insurance companies stimulate economic activity, which improves financial and social stability and, as a result, promotes entrepreneurial activity. This explains why insurance and economic growth are linked. From this premium credits are granted for financing projects in the public and private sector and this will boost the GDP, and by extension, the overall economy.

To support the view of Billah (2013) on potency of insurance business to drive economic growth, the functions of insurance businesses are comparable to those of banking institutions, according to Etale and Edoumiekumo (2019), hence they should be considered as supporting and complementing the banking sectors. Risk sharing through insurance offers investors' confidence and allows them to enter high-risk businesses, resulting in economic growth. It goes without saying that without insurance, businesses who suffer a loss will have to pay for it out of their working capital budget, which could have a negative impact on their operations depending on the size of the loss. Furthermore, Insurance businesses' practices, according to Iyodo, Samuel, and Inyada (2019), impact the growth of economy via the channels of capital marginal productivity, protection, technical advancements, and savings rate. Insurance companies compensate those who have suffered a loss and help individuals and businesses stabilize their financial positions by transferring various types of risks to insurance companies.

2.2.7 Conceptual Framework

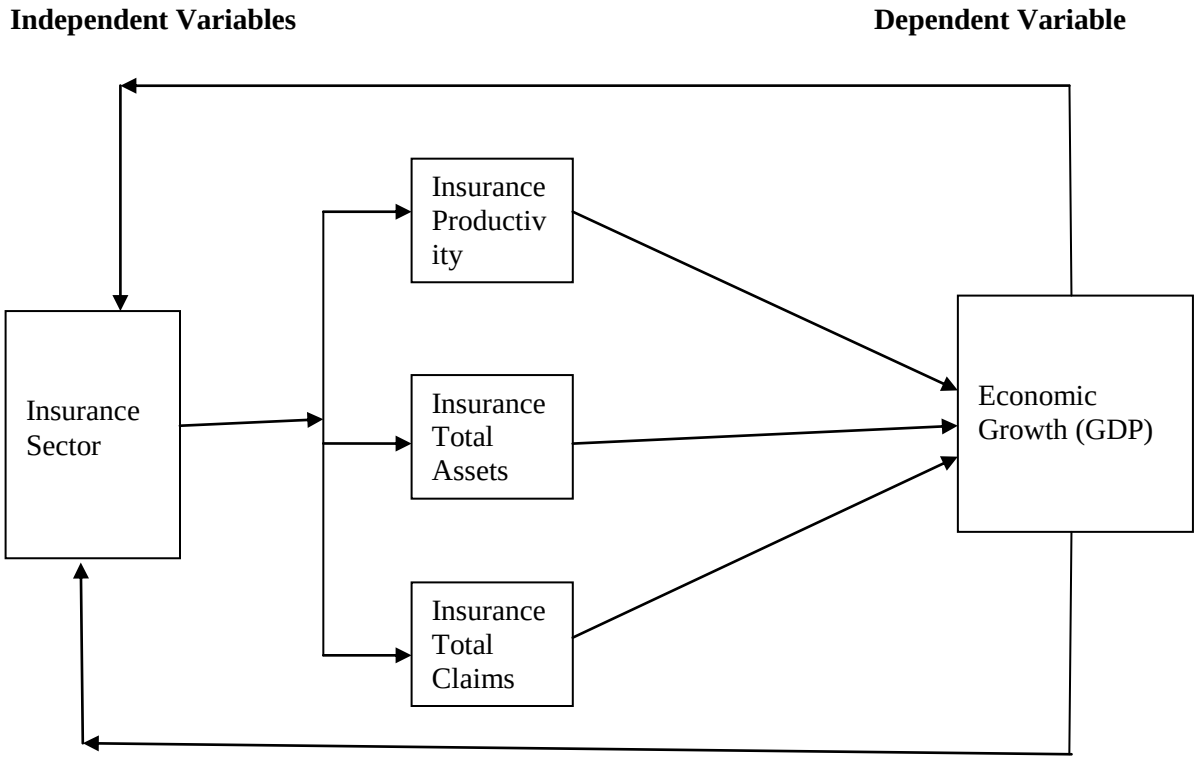


Figure 1: Researchers' Conceptual Framework depicting the relationship among the variables of interest

2.2 Theoretical Framework

This study is predicated on the theory of Finance-Growth Nexus, which was developed by Joseph Schumpeter (1911). According to this theory, financial services are crucial for moving economy forward, so far they increase productivity by fostering technical innovation, investment, and assisting entrepreneurs with the highest prospects of success in the innovation process. He maintained that economic growth might be aided by the mobilization of productive savings, efficient resource allocation, and reinvestment of mobilized financial resources into the economy. By implication, this theory posits that a developed insurance sector is capable of supporting economic growth through financial resources mobilizations in forms of savings for investment, guaranteeing success of entrepreneurs by assuming their business risks, technical innovations in terms of different insurance products capable of attracting the best of businesses into insurance sector.

2.3 Empirical Review

Akpan and Joseph (2017) empirically evaluated the contributions of insurance companies and commercials banks' investment portfolio to economic growth in Nigeria from 1996 to 2011. The study collected secondary data and analyzed them with multiple linear regression method. The study's finding revealed that insurance investment portfolios did not contribute significantly to the growth of Nigerian economy during the period covered by the study. However, it was reported by this study that investment portfolios of commercial banks significantly facilitated Nigerian economic growth within the study period.

Nwafor (2017) researched on the effect of insurance business on economic growth and development in Nigeria between 2007 and 2016 with the aim of determining what effect insurance business in Nigeria has on Nigerian economic growth and development. Outcome of the analysis revealed that insurance business in Nigeria had significant negative impact on Nigerian economic growth and significant negative impact on unemployment rate in Nigeria. consequently, the study recommended National Insurance Commission should monitor of payment of claims by Nigerian insurance companies properly so as to maintain transparency and avoid extortion, all of which with enable the public to repose confidence in the Nigerian insurance companies' services, and by extension promote economic growth.

Olayungbo (2015) separately investigated the effects of life and non-life insurance on Nigerian economic growth from 1976 to 2013. Analysis of data was done by Autoregressive Distributed lags. Finding from the study evinced a relationship exist among economic life, non-life insurance and economic growth in Nigeria in the long run, and that both in the long and short run, life and non-life insurance made a positive and significant contribution Nigerian economic growth. Accordingly, it was concluded that life and non-life insurance business enhance Nigerian economic growth. Okparaka (2018) examined the impact of insurance investments on Nigerian capital market. Market capitalization was the dependent variable while investments by the insurance companies in government securities as well as their investments in stocks and bonds were the independent variables. Secondary data were collected and analyzed by regression. Hence, the study reported that the investment of insurance in government securities and insurance investment in stocks and bonds maintained positive and significant relationship on market capitalization. It was consequently concluded that the collective investment of insurance businesses in Nigeria via capital market are capable of significantly promoting the growth market capitalization. It was thus suggested that insurance industry should be encouraged to make diversified investment portfolio in Government Securities by purchasing securities of foreign governments.

While examining the link between economic growth and insurance business in Nigeria from 1980-2011, Oyedotun and Adesina (2015) used GDP to measure economic growth as dependent variables while exchange rate, inflation rate and percentage of contribution to GDP by the insurance companies were modeled as explanatory variables. The study sourced for data from the secondary sources and analyzed them using ordinary least square. From the result of this study, it was revealed that insurance business had

positive relationship with Nigerian economic growth during scope of the study. Hence, the study concluded that government must include insurance sector in her transformation agenda so long the sector has the capacity large enough to absolve risk from all sectors. Kaya and Beser (2020) evaluated the effect of insurance premium on economic growth in 25 European Union countries 2009 to 2017. GDP was the dependent variable to measure economic growth while insurance premiums were the independent variables. Data were gathered from the World Bank and Insurance Association of Turkey. Results from the study indicated that there was relationship between economic growth and insurance premium volume on long-term basis, such that a 1% increase in insurance premium volumes was associated with a rise of 0.113% in economic growth.

Nwafor (2019) empirically examined the impact of insurance deepening on economic growth in Nigeria between 1990 and 2016. Gross domestic Product was the dependent variable while percentage of insurance premiums to GDP was use to proxy insurance premiums as independent. Collection of data was from CBN Statistical Bulletin, the database of NAICOM. Ordinary least square was used to analyze the data while result showed that that insurance deepening has significantly but negatively impacted on Nigerian economic growth. Onyele Ariwa (2019) investigated the effect of risk transfer on Nigerian insurance industry from 1988 to 2018. Result of this study showed that claims on fire, accident and employers' liability maintained a negative relationship with growth of insurance industry over a longer period while the Granger causality test unfolded that claims on fire, accident, motor vehicle and employers' liability facilitated the growth of the insurance industry. Also, by collecting and analyzing data collected from the secondary sources from 2007 – 2016, Fashagba (2018) studied the impact of insurance on economic growth in Nigeria. Data were analyzed by Ordinary Least Square Regression and the study indicated a statistically insignificant evidence of positive relationship between non-life insurance and economic growth while a negative and significant association was recorded between business of life insurance and the Nigerian economic growth. As a result of the foregoing, the study concluded that while non -life insurance stimulated Nigerian economic growth, life insurance negatively influenced Nigerian economic growth.

Applying co-integration and causality analysis, Ukpong and Acha (2017) examined the relationship between insurance and Nigerian economic development. Time series data covering 1990 – 2013 were collected from the secondary sources. Data analysis was carried out by employing stationarity test, cointegration test, and multiple regression method and granger causality tests. Results evidently showed that all the variables cointegrated when GDP was the endogenous variable; also, the result of the granger causality test unfolded a bidirectional relationship existing between GDP and non-life insurance premiums total while a unidirectional relationship existed between GDP and life insurance premiums total. Consequently, the study was resolved that insurance business both contributed and had a long term equilibrium relationship with Nigerian economic development. Peleckiene, Peleckis, Dudzeviciute, and Peleckis (2019) used secondary data from 2004 to 2015 to investigate the relationship between insurance and economic development in 27 EU nations. For data analysis, they used descriptive statistics, correlation analysis. According to their findings, the insurance business contributed more to economic growth in developed countries, Ouedraogo, Guerineau, and Sawadogo (2018) used data from 1996 to 2011 to evaluate the estent of association between the development of the life insurance business and economic growth in 86 developing nations. The study's time series secondary data came from the World Bank's development indicators. Total life insurance premium (independent variable) and GDP (economic growth) were the variables employed in the study (dependent variable). For data analysis, descriptive statistics and the generalized moments method (GMM) were used. The findings revealed that the development of the insurance sector maintained a positive influence on economic growth, but the influence varied by nation due to the varying economic features of the countries.

Ul Din, Abu-Bakar, and Regupathi (2017) used data from 20 nations from 2006 to 2015 to analyze the relationship between insurance industry and Nigerian economic growth. GDP. They used Hausman test statistics to analyze the data, and the findings verified that insurance activities had a considerable

beneficial impact on economic growth; however, non-life insurance business had a bigger impact than life insurance practice. Fadun and Shoyemi (2018) used secondary data from the CBN to study the impact of insurance investment funds on the growth of the Nigerian economy from 2000 to 2015. The dependent variable in the study is gross domestic product, which represents economic growth, and the total insurance investment is the independent variable (independent variable). For data analysis, the study used Pearson's correlation coefficient and the OLS approach. They discovered a strong positive relationship between insurance investment and GDP. Skalska (2018) used the financial time series method to investigate the effect of insurance business on economic growth in the Czech Republic from 2000 to 2017. It was discovered that there was a link between the growth of the insurance industry and economic growth. Fadun and Shoyemi (2018) used the OLS approach to examine the association between insurance investment funds and economic growth in Nigeria from 2000 to 2015. The findings revealed that there was a substantial positive relationship between Nigeria's economic growth and total insurance investment, as well as a positive relationship between total insurance investment and GDP in Nigeria.

Onyebuchi, Nwankwo, and Onuka (2018) conducted research on the impact of the insurance sector's development on the sustainability and growth of Nigerian economy. They investigated whether insurance income had an impact on Nigeria's economic growth by looking at the impact of insurance premiums on the country's growth and finding the effects of gross insurance demand on the country's growth. Ogunlokun and Adeleke (2018) investigated the impact of the insurance sector's development on economic growth. Inferential statistics were used to analyze the data for this study, while the findings of the unfolded that the insurance sector has a considerable impact on economic growth. However, because most insurance proxies had a negative association with economic growth, the effect of the insurance sector on economic growth was adjudged negative both in the short and long run, pointing to the insurance sector's underdevelopment. Based on the findings, it was suggested that gross insurance premiums be better managed and that funds be invested in viable initiatives that will generate more revenue for the insurance industry; additionally, efforts should be geared towards raising public awareness of insurance operational activities and their inherent benefits.

The empirical studies reviewed above show that even though researchers appear to have done justice to the connection between the Nigerian insurance sector development and Nigerian economic growth, there is evidence that grounds that have not been cover exist in the area of equally important indicators of insurance performance and development such as insurance sector total assets, insurance claims and insurance sector productivity, measured by Gross Domestic Product of the insurance sector that remain unaddressed by the existing studies. To address the foregoing vacuum, this study examines the effect of insurance sector development on the growth of Nigerian economy.

3.0 Methodology

3.1 Research Design

This study made use of quantitative data and specified linear model to examine the relationship between insurance sector development and economic growth of Nigeria for the period 2003 to 2020. The ex-post facto research design is employed in this study.

3.2 Sources of Data

Secondary data was used in this study. Basically, time series data were collected from the Central Bank of Nigeria Statistical Bulletin in the referenced period. The choice of this source was informed by the availability and reliability of the data since there are compiled by one of the top financial sector regulators (CBN) in Nigeria.

3.3 Method of Data Analysis

To determine the most suitable method of analyzing data, this study began with the stationary test of each of the research variables by employing Philips-Perron approach to establish their order of Integration. The stationary test revealed mixture of order I(0) and I(1) integration and this suggested the adoption of Autoregressive Distributed Lags Model as the appropriate data analysis technique following the work of Shin and Smith (2001). This model is beneficial as it can be applied on a time series data whether or not the variables are of order zero or one.

3.4 Model Specification

The model used in this study is adapted from the work of Etale (2019) who examined the insurance sector development and economic growth in Nigeria using the model:

GDP = f (INV, PRE, CLA),……(3.1)

The present study thus adapted the above model in line with the theoretical proposition in Finance growth Nexus theory. Thus, the mathematical form of the model employed in this study is stated as follow:

RGDP = f (GDPIS, INSTA & INSTC)…… ..(3.2)

The econometric form of the model in equation (3.2) is expressed as:

RGDP = β_0 + β_1RGDPIS + β_2INSTA + β_3INSTC + U_t ……..(3.3)

By taking the log of Eq(3.3), we have:

lnRGDP = β_0 + $\beta_1$lnRGDPIS + $\beta_2$lnINSTA + $\beta_3$lnINSTC + U_t ……..……..(3.4)

The Autoregressive Distributed Lags form of the equation (3.4) is specified thus:

$$\Delta lnRGDP_t = \beta_{0i} + \beta_1 lnRGDPIS_{t-1} + \beta_2 lnINSTA_{t-1} + \beta_3 lnINSTC_{t-1} + \sum_{i=1}^{p} \theta_i \Delta lnRGDP_{t-1} + 1 + \sum_{i=1}^{p} \gamma_i \Delta lnRGDPIS_{t-1} + \sum_{i=1}^{p} \lambda_i \Delta lnINSTA_{t-1} + \sum_{i=1}^{p} \varphi_i \Delta lnINSTC_{t-1} + \Psi ECM_{t-1} + U_t \ldots\ldots\ldots\ldots\ldots\ldots\ldots\ldots\ldots\ldots\ldots\ldots\ldots (3.5)$$

3.5 Variables Description

$\gamma_i, \lambda_i, \varphi_i$ = The short run coefficients or multipliers. p = lag order of the endogenous variable; q = lag order of the exogenous variable; ΨECM_{t-1} = The coefficient that measures the adjustment speed of ΔlnRGDP to the equilibrium should there be deviation; it is expected to be negative and statistically significant. RGDP = Real Gross Domestic Product which is the total output of goods and services produced in Nigeria as proxy for economic growth. GDPIS = Real Gross Domestic Product of the insurance sector to proxy the development and productivity of the sector. INSTA: This is the monetary value of all the assets base of the Nigerian insurance sector as reported in the combined financial statements. INSTC = This is the insurance sector total claims, measured by their insurance sector claim expenditure reposted in their combined financial statement. β_0 = constant of the regression equation; $\beta_1 - \beta_3$ = parameters to be estimated; ln = logarithm denotation; f = linear functional relationship denotation.

3.6 A priori Expectation

Considering the theoretical framework underpinning this study states that financial development is directly related to economic growth; hence the following are the expected relationship among the research variables: $\beta_1 > 0$ i.e Positive; $\beta_2 > 0$ i.e Positive and $\beta_3 > 0$ i.e Positive.

4.0 Result and Discussion

4.1 Descriptive Statistics

To examine the characteristics of the data used in the study, descriptive statistics were computed for individual research variables and the result are relayed on Table 1:

Table 1: Summary of Descriptive Statistics

	LRGDP	LRGDPIS	LINSTA	LINSTC
Mean	10.90194	5.417658	13.25624	11.56805
Median	10.98033	5.508221	13.28180	11.68400
Maximum	11.17588	5.695592	14.51741	14.03675
Minimum	10.40441	4.857950	11.73019	9.150081
Std. Dev.	0.259721	0.250366	0.772570	1.651455
Skewness	-0.580030	-1.012641	-0.453557	-0.027450
Kurtosis	1.903908	2.804567	2.623751	1.569840
Jarque-Bera	1.910366	3.104972	0.723315	1.536279
Probability	0.384742	0.211721	0.696521	0.463875
Sum	196.2349	97.51784	238.6124	208.2249
Sum Sq. Dev.	1.146735	1.065610	10.14670	46.36416
Observations	18	18	18	18

Source*:* Authors' Computation, 2022

Table 1 describes the characteristic nature of the sample data series relating to the effect of insurance sector development and the growth of Nigerian economy. Thus, is obvious from the Table 1 that insurance total assets (INSTA) has highest average value of 13.26, this is followed by insurance sector total claims paid (INSTC) with mean value of 11.57. The next is economic growth (RGDP)with average value of 10.90 while the productivity of the insurance sector (RGDPIS) has the lowest average value of 5.42. Observing the standard deviation result from the sample mean values reveals that all the variables generally have low standard deviations from their mean values; specifically, both insurance sector productivity and economic growth has the lowest standard deviation values of 0.26 and 0.25 respectively and this means that their observations for the period covered by this study closely cluster around their mean values.

This is followed by insurance sector total assets with standard deviation value of 0.77 which is also low and implies the observations are not widely spread from the mean value; In addition, it is interesting to know that in accordance to expectation, Table 1 reveals that all the mean values of these variables lie between the minimum and the maximum mean values. Insurance total claims is found to have the highest value of standard deviation at 1.65 and this implies that its series are not closely clustered around its mean value. Generally, all the sample series except economic growth are very low in standard deviation value

relative to their sample mean values and this suggests possible low estimation risk or error. With respect to skewness which measures the degree of asymmetry of the series, it is expected that normal skewness should have 0 value to be normally skewed. Thus, all the variables except insurance productivity are positively skewed; hence, they are bound to have long right tail with higher values than the sample mean.

Concerning Kurtosis result, for a distribution to be normal, and therefore, mesokurtic, its kurtosis value should be around 3. Looking at Table 1, the variables are they are platykurtic and flatted curve since they all have values lower than 3. This is suggestive that the observations series will have more of lower values than the sample average value. The null hypothesis for Jarque-Bera is that the distribution is normal. Therefore, the result on Table 1 shows clearly that all the variables have Jarque-Bera probability values that are greater than 0.05 significance level; hence, there was inadequate evidence to reject the null hypothesis. It is consequently concluded in this study that all the variables exhibited normal distribution curves.

4.2 Unit Root Test

Philips-Perron Unit root test approach was used to establish the integration order of each of the research. Hence, the results of the tests for each of the variables in models with intercept are presented in Table 1 at both logarithmic their first difference levels.

Table 2: Test Results for Philips Peron Unit Root

Unit root test at logarithmic levels

H0: b = 0; Ha: b > 0

Variables	Critical value @5%	Philips Peron test statistics	Remarks	Order of Integration
lnRGDP	-3.052169	-4.092715	Stationary	I(0)
lnGDPIS	-3.052169	-4.905193	Stationary	I(0)
lnINSTA	-3.052169	-1.248354	Non-stationary	Nil
lnINSTC	-3.052169	-0.349777	Non-stationary	Nil
	Unit root test result at first differences			
Variables	Critical value @5%	Philips Perron test statistics		Order of Integration
lnRGDP	-	-	Stationary	I(0)
lnGDPIS	-	-	Stationary	I(0)
lnINSTA	3.065585	-3.073419	Stationary	I(1)
lnINSTC	3.065585	-9.445244	Stationary	I(1)

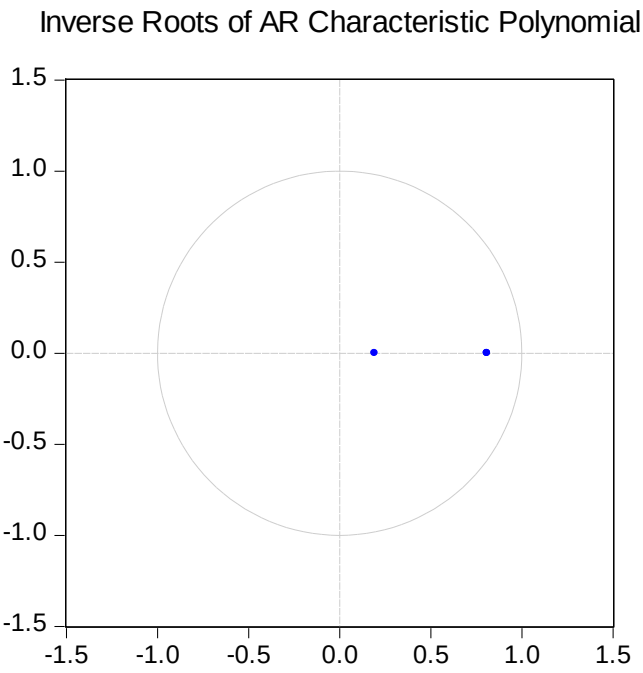
Source: Authors' Computation, 2022

Notes: *Denotes significance at the 5% level and the rejection of the null hypothesis of non-stationarity.

Table 2 reveals that the variables of interest are mixture of order *I*(0) and *I*(1) i.e at logarithmic level, RGDP and RGDPIS were stationary while INSTA and INSTC were stationary at first difference. This is a prerequisite for employing ARDL as an estimation technique according to Peasaran and Shin (2001).

4.3 ARDL Model Dynamic Stability Test

The ARDL model was subjected to dynamic stability test by estimating the inverse root of AR characteristic polynomial. The result, which is depicted on Figure 1 reveals that all the roots were inside the unit circle. Consequently, it was concluded that the model of this study was dynamically stable.



4.4 Co-integration Bound Test

This test is usually conducted with a null hypothesis no co-integration exists among the research variables. The co-integration bound test result is displayed on Table 3. This result shows F-statistic value is 6.37 which is evidently above the value for the lower critical I(0) and upper I(1) critical bounds. As a result of this, there were no sufficient facts to accept the null hypothesis. Therefore, Null hypothesis was rejected in favour of the alternate hypothesis; hence, the study concluded that there was existence of long-run equilibrating relationship among the research variables.

Table 3: Co-integration Bound Test Result

Null Hypothesis: No long-run relationships exist

Test Statistic	Value	k
F-statistic	6.368121	3

Critical Value Bounds

Significance	I0 Bound	I1 Bound
10%	2.72	3.77
5%	3.23	4.35
2.5%	3.69	4.89
1%	4.29	5.61

Source: Authors' Computation, 2022

Having established the existence of long-run co-integration relation among the research variables, the next step is to estimate the long-run coefficients of the parameters and the result of this are displayed on Table 4.

Table 4: Error Correction Model (ECM) and Long Run Coefficients with ARDL

short Run Coefficients				
Variable	Coefficient	Std. Error	t-Statistic	Prob.
D(LRGDPIS)	0.167087	0.070422	2.372650	0.0417
D(LINSTA)	-0.039877	0.028483	-1.400017	0.1950
D(LINSTA(-1))	-0.045145	0.029254	-1.543173	0.1572
D(LINSTC)	0.003417	0.009331	0.366177	0.7227
Cointeq = LRGDP - (0.8092*LRGDPIS -0.0919*LINSTA + 0.0165*LINSTC +				
7.7731)				
Long Run Coefficients				
Variable	Coefficient	Std. Error	t-Statistic	Prob.
LRGDPIS	0.809233	0.301463	2.684349	0.0250
LINSTA	-0.091897	0.108271	-0.848775	0.4180
LINSTC	0.016549	0.039631	0.417577	0.6860
ECM	-0.206476	0.086998	-2.373346	0.0417
C	7.773149	0.927903	8.377110	0.0000

Source: Authors' Computation, 2022

From Table 4, the co-integrating equation predicting the relationship on the long run among the variables of interest. From the result above, it can be observed that the ARDL estimation result reveals that in the long run, the development and productivity of the insurance sector (RGDPIS) maintained positive and significant relationship with economic growth with coefficient 0.8092 ($p=0.0250< 0.05$). This implies that 1% increase or decrease in insurance productivity was associated with about 81% increase or decrease in the economic growth of Nigeria; this result equally tallies with the result obtained in the short run in which insurance productivity was positively and significantly related to economic growth. Furthermore, insurance sector total asset (INSTA) by the result on Table 4 was found to be negatively and insignificantly related to economic growth on the long run with coefficient -0.0919 ($p=0.4180>0.05$); this therefore, connotes that should the insurance sector total assets be increased by 1%, there would be about 9% resultant decrease in the Nigerian economic growth and vice versa; this result is not different from the situation obtainable in the short run as the total assets of the insurance sector negatively and insignificantly predicted Nigerian economic growth.

Looking at the relationship exhibited by insurance sector total claims expenditure (INSTC), it is observable that total claims paid by the insurance sector was directly but significantly associated with Nigerian economic growth in the long run with coefficient 0.0165 ($p=0.6860 > 0.05$). This simply shows that should insurance claims expenditure payment be jerked up 1%, it would both long run and short run triggers about 1.7% and 0.3% respective increase on the average in economic growth of Nigeria and vice versa. The Error Correction Term (ECT) as reported on Table 4 is -0.20. This coefficient is rightly signed and signifies the speed of adjustment or convergence to long-run equilibrium by the research variables, such that the previous year deviation from long-run equilibrium was corrected in the current period at an

adjustment speed of 20%. The implication of this remains that when economic growth, proxied with RGDP was at disequilibrium level due to shocks experienced from the explanatory variables, the speed at which it converges to equilibrium was 20%.

4.5 Diagnostic Test

4.5.1 Autocorrelation test

To be sure that the residuals are free from autocorrelation complicity in the estimated model, this study conducted serial correlation test using Breusch-Godfrey approach and the results were shown on the Table 5.

Table 5: LM serial Correlation Test

Breusch-Godfrey Serial Correlation LM Test:

F-statistic	0.327369	Prob. F(2,7)	0.7313
Obs*R-squared	1.368537	Prob. Chi-Square(2)	0.5045

The null hypothesis (H0) for this test is that the residuals are uncorrelated serially. Looking at Table 4.5, the F-stat p-value is 0.7313, which greater than 0.01 and 0.05 critical values; it shows that we could not reject the null hypothesis at both 1% and 5% significance levels. Hence, we concluded that the residuals were uncorrelated serially and the coefficients produced by the estimated model were not biased.

4.5.2 Test Homoskedasticity

In an effort to subject the efficiency of the estimator used in this study to test, homoskedasticity tested on the residuals of the ARDL estimates by employing Breusch-Pagan-Godfrey. The results were displayed by Table 4.6:

Table 6: Heteroskedasticity Test: Breusch-Pagan-Godfrey

Heteroskedasticity Test: Breusch-Pagan-Godfrey

F-statistic	1.335146	Prob. F(6,9)	0.3342
Obs*R-squared	7.534828	Prob. Chi-Square(6)	0.2742
Scaled explained SS	4.278462	Prob. Chi-Square(6)	0.6390

In addition, the null hypothesis in this test is that the residuals are homoskedastic. Observing closely Table 6 however revealed that the F-statistic p-value is 0.3342, which is higher than critical values at 0.01 and 0.05; hence, there was inadequate evidence to reject the null hypothesis at both 1% and 5% significance levels. We therefore concluded that the residuals were homoskedastic and the estimator was efficient.

4.6. Hypothesis Testing

4.6.1. Insurance productivity and the growth of Nigerian economy

From the long-run coefficients displayed on Table 4, the proxy for insurance sector development and productivity (RGDPIS) was found to be a stimulant of Nigerian economic growth and it maintained positive and significant relationship with Nigerian economic growth, in a manner that increase in the insurance productivity would promote Nigerian economic growth significantly. Hence, since the probability value $0.0250<0.05$, there insufficient evidence to accept the null hypothesis; hence the null hypothesis H01 which states that insurance sector productivity has no effect that is significant on the growth of Nigerian economy was accepted.

4.6.2 Insurance sector Assets and the growth of Nigerian economy

Table 4. reveals an inverse and inconsequential effect betwixt insurance total assets and the growth of Nigerian economy. This result means that the asset of the Nigerian insurance sector was a negative and weak determinant of Nigerian economy. Hence, at p-value 0.4180>0.05, the null hypothesis (H0) which states that insurance sector total asset value has no significant effect on the growth of Nigerian economy was accepted. Hence, this study provided sufficient empirical evidence that insurance sector asset has no significant effect on the growth of Nigerian economy.

4.6.3 Insurance sector claims and the growth of Nigerian economy

With respect to the relationship between insurance sector total claims paid and the growth of Nigerian economy, Table 4.4 reveals p-value 0.6860>0.05; the decision appropriate in this case is to accepts the null hypothesis (H0) which states that insurance sector total claims expenditure has no effect that is strong on the growth of Nigerian economy. By the foregoing decision, this study has empirically confirmed that although the claims paid by the Nigerian insurance sector positively influenced Nigerian economic growth, the extent of this influence is weak.

4.7 Discussion of Findings

The main objective of this study is to examine the effect of insurance sector development on the growth of Nigerian economy. As earlier noted, the effect of the insurance sector's productivity, which is the proportion of the insurance sector's contribution to the Aggregate Gross Domestic Product has not been investigated. Hence, this study has enriched the literature by providing the contributory effect of insurance sector to the overall economic growth of Nigeria. One of the objectives of this study is to evaluate the effect of insurance sector productivity on the growth of Nigerian economy; as revealed by this study, the productivity of the insurance sector is significant determinant of Nigerian economy. In other words, the output of the insurance sector was established by this study as a significant contributor to Nigerian aggregate economy, such that with 1% increase in the output of the insurance sector, there would be significant increase in the aggregate economic growth of Nigeria by about 81% in the long run and vice versa.

This result aligns with theoretical expectation that development of finance is capable of spurring economic growth; hence, the result obtained in this study confirms the Finance-Growth Nexus theory developed by Joseph Schumpeter that financial services are crucial for economic progress, so far they increase output by fostering technical innovation, investment, and assisting entrepreneurs with the highest prospects of success in the process of innovation. He maintained that economic growth might be aided productive savings are mobilized, efficient resources are efficiently allocated, and mobilized financial resources are reinvested into the economy.

The second specific objective of this study was to examine the effect of insurance sector total asset value on the growth of Nigerian economy. In respect of the foregoing, this study found evidence of negative but insignificant relationship between the total assets of the insurance sector and the growth of the Nigerian. In specific terms, this study provided empirical evidence that 1% increase in the insurance sector total asset value is capable of causing about 9% decrease in the growth of the economy. This result betrays the theoretical expectation and implies that Nigerian insurance sector are not efficiently deploring their assets in a manner that promotes economic growth. The possible explanation for this can be linked to the large proportion of the short term investment components of the total assets of the insurance sector which fails to provide the needed support for the growth of Nigerian economy plus the management inefficiency in the deployment of these assets.

Furthermore, the last specific objective of this it to assess the effect of insurance sector total claims expenditure on the growth of Nigerian economy. Theoretically, it was expected that prompt payment of claims would attract more individuals and businesses to take up insurance policies as they get assurance of prompt claim payment. This expectation is empirically confirmed by this study as the obtained result revealed insurance claims as a positive but insignificant influencer on the growth of economy in Nigeria.

The insignificant result points to a plausible explanation that the Nigerian insurance sector operators are not efficient to the level expected in terms of prompt claim settlements, and this can be corroborated by the myriads of complaints of non-compensation usually lodged by the insured and the needless rigmaroles in compensation procedures of the Nigerian insurance practitioners, which often discourage the both the actual and the prospective policy holders from taking up insurance policy.

Linking the results obtained in this study to the literature, they corroborate the finding of Olayungbo (2015) who separately investigated the effects of life and non-life insurance on Nigerian economic growth from 1976 to 2013 and found evidence of positive relationship between insurance sector and economic growth both in the long run and short run. The present result also aligns with those of Oyedotun and Adesina (2015) who examined how economic growth affect insurance business in Nigeria from 1980-2011, Kaya and Beser (2020) evaluated the effect of insurance premium on economic growth in 25 European Union countries 2009 to 2017 and Peleckiene, et al. (2019) of whom found positive relationship between economic growth and insurance premium volume, such that a 1% increase in insurance premium volumes was associated with a rise of 0.113% in economic growth. The results of this study uphold the result of Ouedraogo, Guerineau, and Sawadogo (2018) that used data from 1996 to 2011 to evaluate the connection between the life insurance business development and economic growth in 86 developing nations and found that the development of the insurance sector had a favorable impact on economic growth. In addition, Fashaba (2018) also reported positive and insignificant relationship between insurance claims and Nigerian economy, just like Ul Din, Abu-Bakar, and Regupathi (2017) found direct relationship between insurance claims and economic growth

However, the results obtained in this study are at variance with some existing findings reported by Ogunlokun and Adeleke (2018) in the short and equally in the long run, insurance sector and economic growth are inversely related, pointing to the insurance sector's underdevelopment. Equally, the present results contradict those of Nwafor (2017) who investigated the effect of insurance business on economic growth and development in Nigeria between and found evidence of negative relationship. Also, this study found positive relationship between insurance claims and economic growth. Consequently, the foregoing result equally disagrees with Ariwa and Onyele (2019) who investigated the effect insurance risk transfer on Nigerian economy from 1988 to 2018 and reported negative relationship.

Conclusion and Recommendations

This study has assessed the connection betwixt development of insurance sector and Nigerian economic growth from 2003 to 2020. The results obtained in this study have clearly provided empirical evidence that development of insurance sector over the period covered by this study has relationship with growth of Nigeria's economy. In terms of the specific objectives, the estimated results provide evidence that positive relationship exist between two of the proxies of insurance sector development, being insurance sector productivity and insurance sector claims and the growth of Nigeria's economy, while the insurance sector total assets had inverse relationship with the growth of Nigerian economy. Findings obtained further led to the rejection of null hypothesis in one case and the rejection of the alternate hypotheses in two other cases. However, looking at the significance of the insurance sector productivity in promoting economic growth as revealed by this study, it is concluded that insurance sector development is a positive and significant determinant of the growth of Nigerian economy both in the short run and in the long run. Based on the findings revealed by this study, it is recommended thus:

i. In the light of the magnitude and the significance of the insurance productivity in promoting economic growth as revealed by this study, the Nigerian government should consider insurance sector as one of those critical to Nigerian economic growth and should be so treated by according it same attention with banking sector and other critical sectors of the economy.
ii. The insurance administrators and management should be alive to their responsibility of efficiently managing insurance assets by diversifying their investments from short-term to long-term assets that are capable of supporting economic growth so as to reverse the negative position it maintained by the evidence provided by this study.

iii. Insurance sector claims was found to maintain positive but insignificant relationship with Nigerian economic growth; hence, the insurance operators should step up their game by embracing prompt claim settlement so as to encourage more individuals and businesses to patronize insurance products in the country; when this is done, Nigerian economy growth would be promoted as evidenced in this study.

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