# Insurance Companies and the Efficiency of Financial Intermediation in Nigeria

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## ABSTRACT

The study examined the relationship between insurance companies and financial intermediation in Nigeria. The insurance industry is a vital part of the entire financial system. Apart from commercial banks, insurance companies contribute significantly to financial intermediation of the economy. Despite the fact that insurance companies are vital part of Nigerian financial system, Nigerian insurance companies have been struggling to meet up with their objective of enhancing sound financial intermediation efficiency. The objective of this study is to examine the relationship between Total insurance claims and Total insurance Income, Total insurance expenditure in order to determine the impact of insurance companies on financial intermediation efficiency in Nigerian insurance sector.This study relied basically on secondary data which are obtained from Central Bank of Nigeria statistical bulletin (CBN) and National Insurance Commission (NAICOM) annual report.The method of data analysis employed to achieve the stated objective is multiple regression analyses. It was revealed that there exist a positive or strong correlation between the dependent variable and independent variable in the insurance efficiency equation. Independent variables has been found as an increasing function of Dependent variable, this means that there is an increase in the level at which insurance companies fulfil their customers claims. It was also discovered that the parameter of total insurance income and other insurance expenditure in relationship with total insurance claim is statistically significant. The study therefore recommends that policies should be formulated to address firm-specifics and macroeconomic fundamentals that will drive down the high wedge between total insurance claims and total insurance income to further strengthen the efficiency of financial intermediation which will impact positively on economic growth. The study also recommends that there is need to strengthen the supervisory framework to curb tendencies for rent seeking behaviour of insurance company's management.

**Keywords:** Insurance company, Financial Intermediation, Insurance claims, Premium, Insured, Insurance expenditure.

## INTRODUCTION

Insurance companies provide sound financial services for growth and development in Nigeria. Such specialized financial services range from the underwriting of risks inherent in economic entities and the mobilization of large amount of funds through premiums for long term investments.  The risk absorption role of insurers promotes

financial stability in the financial markets and provides a sense of peace to economic entities. The insurance companies' ability to cover risk in the economy hinges on their capacity to create profit or value for their shareholders. A well-developed and evolved insurance industry is a boon for economic development as it provides long- term funds for development (Charumathi, 2012; (Ahmed, Ahmed, and Ahmed, 2010; and Agiobenebo and Ezirim, 2002).

Financial performance is a measure of an organization's earnings, profits, appreciations in value as evidenced by the rise in the entity's share price. In insurance, performance is normally expressed in net premiums earned, profitability from underwriting activities, annual turnover, returns on investment and return on equity. These measures can be classified as profit performance measures and investment performance measures. Profit performance includes the profits measured in monetary terms. Simply, it is the difference between the revenues and expenses.

These two factors, revenue and expenditure are in turn influenced by firm-specific characteristics, industry features and macroeconomic variables. Investment performance can take two different forms. The return on assets employed in the business other than cash, and there turn on the investment operations of the surplus of cash at various levels earned on operations(Chen and Wong, 2004; and Asimakopoulos, Samitas, and Papadogonas, 2009).

At the micro level, profit is the essential pre-requisite for the survival, growth and competitiveness of insurance firms and the cheapest source of funds. Without profits insurers cannot attract outside capital to meet their set objectives in this ever changing and competitive globalized environment. Profit does not only improve upon insurers' solvency state but it also plays an essential role in persuading policyholders and shareholders to supply funds to insurance firms. Thus, one of the objectives of management of insurance companies is to attain profit as an underlying requirement for conducting any insurance business(Chen and Wong, 2004; and Harrington and Wilson, 1989).

## PROBLEM STATEMENT

The insurance industry is a vital part of the entire financial system. Apart from commercial banks, insurance companies contribute significantly to financial intermediation of the economy.As such, their success means the success of the economy; their failure means failure to the economy (Ansah-Adu, Andoh, and Abor, 2012; and Agiobenebo and Ezirim, 2002).

Despite the fact that insurance companies are vital part of Nigerian financial system, Nigerian insurance companies have been struggling to meet up with their objective of enhancing sound financial intermediation efficiency. Identifying the key success indicators of insurance companies can help in facilitating the design of policies that may improve the profitability of the insurance industry. Hence, the determinants of insurers' profitability have attracted the interest of investors, researchers, financial markets analysts and insurance regulators. The overall financial intermediation performance of insurance companies in Nigeria is not adequately worthwhile except for some companies which accomplished some revenues.

## OBJECTIVES OF THE STUDY

The broad objective of this study is to examine the relationship between the insurance companies and the efficiency of financial intermediation in Nigeria. The specific objective is to:

i. Examine the relationship between Total Insurance Claims and Total Insurance Income/Expenditure.

## RESEARCH HYPOTHESIS

**Ho:** There is no significant relationship between Total insurance claims and Total insurance Income/expenditure in Nigeria.

## SIGNIFICANT OF THE STUDY

The study importance emerges from the fact that insurance sector plays a significant role in enhancing the country economy, and providing critical services for people in Nigeria, the current study will empirically implement a comprehensive analytical framework of financial intermediation performance in the case of Nigerian insurance sector.

The current study will also provide a comprehensive framework and literature about insurance financial intermediation efficiency and the factors influencing it in the case of Nigerian insurance companies.

## LITERATURE REVIEW

## CONCEPT OF RISKIN INSURANCE

Insurance replaces the uncertainty of risk with a guarantee that reduces the adverse effects of risk. Risk can be defined as the "uncertainty regarding a loss." Losses, such as auto damage due to an accident or negligence regarding your property, can give rise to a liability risk. The risk is a concept which relates to human expectations. It denotes a potential negative impact on an asset or some characteristic of value that may arise from some present process or some future event. In everyday usage, "risk" is often used synonymously with "probability" of a loss or

threat. This is a term which refers to the probable disadvantageous, undesirable or unprofitable outcome of a fortuitous event, an event which is not desired but taking place. Uncertainty is often confused with risk. Uncertainty refers to a situation where the outcome is not certain or unknown. Uncertainty refers to a state of mind characterized by doubt, based on the lack of knowledge about what will or what will not happen in the future. Uncertainty can be perceived as opposite of certainty where you are assured of outcome or what will happen. Accordingly, some weight or probabilities can be assigned to risky situations, but uncertainty, the psychological reaction ten the absence of knowledge lacks this privilege. The decision under uncertain situations is very difficult for the decision-maker. It all depends upon the skill, the judgment and of course luck. Uncertainty being a perceptual phenomenon implies different degrees to different person.

## ROLES AND IMPORTANCE OF INSURANCE

Insurance has evolved as a process of safeguarding the interest of people from loss and uncertainty. It may be described as a social device to reduce or eliminate risk of loss to life and property.

Insurance contributes a lot to the general economic growth of the society by provides stability to the functioning of process. The insurance industries develop financial institutions and reduce uncertainties by improving financial resources.

1. Provide safety and security:

Insurance provide financial support and reduce uncertainties in business and human life. It provides safety and security against particular event. There is always a fear of sudden loss. Insurance provides a cover against any sudden loss. For example, in case of life insurance financial assistance is provided to the family of the insured on his death. In case of other insurance security is provided against the loss due to fire, marine, accidents etc.

2. Generates financial resources:

Insurance generate funds by collecting premium. These funds are invested in government securities and stock. These funds are gainfully employed in industrial development of a country for generating more funds and utilized for the economic development of the country. Employment opportunities are increased by big investments leading to capital formation.

3. Life insurance encourages savings:

Insurance does not only protect against risks and uncertainties, but also provides an investment channel too. Life insurance enables systematic savings due to payment of regular premium. Life insurance provides a mode of investment. It develops a habit of saving money by paying premium. The insured get the lump sum amount at the maturity of the contract. Thus life insurance encourages savings.

4. Promotes economic growth:

Insurance generates significant impact on the economy by mobilizing domestic savings. Insurance turn accumulated capital into productive investments. Insurance enables to mitigate loss, financial stability and promotes trade and commerce activities those results into economic growth and development. Thus, insurance plays a crucial role in sustainable growth of an economy.

5. Medical support:

A medical insurance considered essential in managing risk in health. Anyone can be a victim of critical illness unexpectedly. And rising medical expense is of great concern. Medical Insurance is one of the insurance policies that cater for different type of health risks. The insured gets a medical support in case of medical insurance policy.

6. Spreading of risk:

Insurance facilitates spreading of risk from the insured to the insurer. The basic principle of insurance is to spread risk among a large number of people. A large number of persons get insurance policies and pay premium to the insurer. Whenever a loss occurs, it is compensated out of funds of the insurer.

7. Source of collecting funds:

Large funds are collected by the way of premium. These funds are utilized in the industrial development of a country, which accelerates the economic growth. Employment opportunities are increased by such big investments. Thus, insurance has become an important source of capital formation.

## FINANCIAL INTERMEDIATION

Financial Intermediation is the process of mobilizing funds from the surplus economic unit to the deficit economic unit. In other words, financial intermediation is the process of mobilizing financial resources from the ultimate saver to the ultimate user. Andrew and Osuji (2013) state that financial intermediation involves the transformation of mobilized deposits liabilities by banks into banks assets or credits such as loans and overdraft. This means that financial intermediation is the process of taking in money from depositors and lending same to borrowers for investments which in turn help the economy to grow. Efficient financial intermediation causes high level of employment generation and income which invariably enhances the level of economic development. According to

Blum (2002), financial intermediation is the process of transferring the savings of some economic units to others for consumption or investment at a price.

For financial intermediation to take place there must be instruments and financial institutions operating together with the objective of bringing about economic growth of the country. Mahmood & Bilal (2010) opined that the rising magnitude of financial intermediation costs have adverse implications on the development of Nigerian economy because in the absence of developed capital market, the private sector which contributes a greater percentage to economic development in Nigeria will primarily depend on bank credit, insurance claime.t.c as a source of financing which will lead to economic development. This means that the constant rise of financial intermediation discourages potential savings due to low returns on deposits. Financial intermediation is an institution that facilitates the channeling of funds between lenders and borrowers indirectly. That is, savers (lenders) give funds to an intermediation institution (such as a bank, insurance companies, NDIC e.t.c), and that institution gives those funds to spenders (borrowers).

## INSURANCE AND ECONOMIC GROWTH

Providing protection, insurers could affect economic growth through the channels of marginal productivity of capital, technological innovations and saving rate. Insurance companies indemnify the ones who suffer a loss and stabilize the financial position of individuals and firms. With possibility of transfer of different kinds of risks to insurance companies, risk adverse economic units are more induced to buy goods and services, especially those of higher values.  In this way insurance sustains demand or consumption for goods and services which encourage production and employment and finally, economic growth. Firms exposed to various risks of their liability, property, illness and disability of their employees and life of key employees, have possibility of managing of those risks by transfer to insurance companies. This allows firms to concentrate their attention and resources on their core business. Therefore, they are more willing and able to take real investments that result in higher rate of economic growth. Additionally, entrepreneurs are encouraged to take not only those investments that encompassed present products and production processes, but also those that include technological innovation. Namely, being innovative presupposes the willingness to take the risk.

Although insurance cannot change the risk attitude of economic units (risk aversion does not change with insurance) it plays a key role in freeing entrepreneurial spirit (CEA, 2006). Therefore, insurance helps entrepreneurs to take innovative and higher-return projects.  Without mechanism for mutualisation, pooling and transferring risk which insurance companies provide, part of the economic activities would not take place and positive effects on social welfare would fail. In other words, by creating an environment of greater security, insurance fosters investment and innovation or economic growth.

Insurance increases marginal productivity of capital also in a way that it makes no need for high liquid contingency funds of firms what results in more funds available for financing high-return projects. Without insurance coverage large contingency funds would be needed to protect firms against risk. It would be particularly hard for small and medium size firms whose access to financing in the case of adverse events is very limited.

Increasing availability of funds could result from kind of insurance products by which insurance companies provide protection from credit risk to other financial intermediaries. In that way financial intermediaries are more willing to lend funds for financing real investments what encourage economic growth.

Positive effect on economic growth through more efficient allocation of resources could be realized by relieving the burden of social welfare system. It is particularly important in the new demographic situation of prolongation of life expectancy, an increase in elderly people and a falling birth-rate while at the same time people expect to receive a high level of healthcare and pensions. It makes big pressure on social security system and could have negative effect on economic growth. But, private insurers could give their contribution in solving problem of social security system. They provide protection from the financial consequence of illness and injury, unemployment and retirement.

Thus, insurance products such as life, health and payment protection insurance, can substitute for government security programs. In the process of making decision on underwriting risk insurance companies gather relevant information on risk factor and assess risk. Insurers' risk assessment is reflected in price and policy conditions. Providing insurance to firms about which they have special knowledge insurers can signal their informed status. In this way, they offer firms an indicator of their risk level. This influences their decisions on investment projects and contributes to more efficiently allocation of their resources.

The function of providing insurance coverage could affect economic growth through saving rate channel in mixed way. On the one side, insurance protection contributes to greater security what makes individuals and firms less careful. As a consequence, they could lower their precautionary savings. On the other side, by offering various life insurance products that combine risk protection and saving benefits, insurance companies encourage long-term

savings. Besides providing insurance, insurance companies could affect economic growth by function of resources accumulation and their allocation with managing various financial risks.

## EMPIRICAL REVIEW

Demiurgic-Kunt and Levine (1996) using data from 44 countries for the period 1986 to 1993 found that different measures of stock exchange size are strongly correlated to other indicators of activity levels of financial, banking, non-banking institutions as well as to insurance companies and pension funds. They concluded that countries with well-developed stock markets tend to also have well-developed financial intermediaries.

Agbamuche (2012) employed Chi-square model in his study on Investment of insurance funds in the Nigerian Capital market, and find out that; (i) the insurance industry invest substantial parts of its funds in the capital market. This implies that the surplus funds of the insurance companies after claims to policyholders have been paid out is then invested in the capital market in the form of government securities, corporate funds, real estate, mortgages etc. (ii) that the investments of insurance funds contributes to the socio economic growth of the country. This implies that as insurance contributions increase, economic growth would also increase hand in hand, (iii) that the insurance industry contributes positively to the growth of the capital market. This implies that the insurance industry is also a center of capital formation, mobilization and allocation of resources within the economy because it deals with long term securities and it enables the funding of other deficit sectors of the economy. This finding shows that the major source of funds available to the insurance industry is through premium incomes; however other incomes come in the form of issuance of shares and other investment returns, (iv) that the insurance industry is a relevant sector of the economy. This would suggest that a direct or positive relationship exists between the insurance industry, insurance contribution and economic growth in the country. Ultimately a relevant and formidable insurance sector would help greatly in boosting overall economic growth in Nigeria.

Boon (2005) also observed in his study that total insurance funds affect both capital formation and gross domestic product growth in the short and long term. The importance of Boon's finding have to do with the fact that insurance and its core activities has a lot to do with investment, which in turn has a direct correlation with increased economic growth and productivity.

Mojekwu, Agwuegbu and Olowokudjo (2011) established and found that total insurance funds affect both capital formation and GDP growth in the short and long term. Their study employed dynamic factor model in their study and find out that there is a functional positive relationship between insurance contributions and economic growth in Nigeria.

Ngong (1997) developed an aggregate index of capital market development and use it to determine its relationship with long run economic growth in Nigeria. The study employed a time series data from 1970 to 1994. For measures of capital market development the ratio of market capitalization to GDP (in percentage), the ratio of total value of transactions on the main stock exchange to GDP (in percentage), and the value of equities transaction relative to GDP and listings used. The four measures were combined into one overall composite index of capital market using principal component analysis. A measure of financial market depth (which is the ratio of broad money to stock of money to GDP) was also included as control. The result of the study was that capital market development is negatively and significantly correlated with long run growth in Nigeria. The result also showed that there exists bi-directional causality between capital market and economic growth.

Ewan, Esang and Bassey (2009) appraise the impact of the capital market efficiency on the economic growth of Nigeria using time series data from 1961 to 2004. They found that the capital market in Nigeria has the potential of growth inducing but it has not contributed meaningfully to the economic growth of Nigeria because of low market capitalization, low absorptive capitalization, illiquidity, misappropriation of funds among others.

Haiss and Sümegi (2008) applied a cross country panel data analysis from 29 European countries in the period from 1992 to 2005. The insurance variable is measured by premium income and total net investment of insurance companies. Premium income is split into life and non-life premium income. As estimation method, the authors use ordinary least squares (OLS) or unbalanced panel with country and time-fixed effects. According to the findings, there is a positive impact of life insurance on GDP growth in the EU-15 countries; Switzerland, Norway and Iceland, while non-life insurance has a larger impact in Central and Eastern Europe.

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

Marijuana, Sandra and lime (2009) empirically examined the relationship between insurance sector development and economic growth in 10 transition European Union member countries in the period from 1992 to 2007. Eze and Okoye (2013) examined the impact of insurance practice on the growth of Nigerian economy. Insurance premium income, total insurance investment and income of insurance development was used as determinants of insurance practice.

They employed unit root tests, Johansen co-integration test and error correction model in data analysis to determine the short and long run effect of the model. The study observed that the insurance premium capital has significantly impacted on economic growth in Nigeria; that the level of total insurance investment has significantly effected on economic growth in Nigeria; and that there is causal relationship between insurance sector development and economic growth in Nigeria. Their findings implied that insurance industry would contribute meaningful to the growth of Nigeria economy in the long run. The study concluded that there is a significant positive effect of insurance practice on the growth of Nigerian economy. They recommended that, having seen that there is long-run relationship between insurance industry practice and economic growth in Nigeria. They further advised that more efforts should be made to increase transparency and efficiency in insurance industry through adequate legislation and policy formulation targeted at providing institutional improvement, especially in risk management and product innovations in Nigeria insurance industry.

Doyle et al (2011) highlight the dangers of creating feedback loops that change the environment when conducting randomized trials. They describe an approach to defining the clusters/ units of randomization used, which preserves community structures 'as far as possible.' The Micro insurance Learning and knowledge Project defines client value as 'the added value provided by micro insurance in comparison with other available risk coping mechanisms'.

The recent econometric work of Melecky and Raddatz (2011) and Von Peter et al (2012) strongly supports the role of insurance in mitigating the aftereffects of natural disasters on economic growth, and possibly even providing a stimulus in the few years after the event. However insurance has a cost and as Toya and Skidmore (2005) and Ghesquiere and Mahul (2010) point out this instrument needs to be seen as a complement to strong infrastructure (including a developed financial sector) and alternative funding mechanisms. Thus the role of the development organizations is two-fold – developing ex–ante instruments to fill gaps in the catastrophe financing market and helping countries to build the infrastructure and institutions that create resilience.

The literature on the impact of rapid onset natural disasters on the poor is nascent, reflecting limited useable data and the fact that few experiments are underway. The experiments that have been started are concentrated in the Philippines and Indonesia – the two most disaster prone countries in the world - and the hazards involved are flood and windstorm, the calamities of most relevance to the poor because of their impact on livelihoods. Magnoni and Budzyna's work in the Philippines appears to show positive post typhoon results, although all of the complexity of the poor household's risk coping mechanisms is highlighted by the time taken to settle claims. However Akter (2012) highlights just how difficult it will be to use index based catastrophe products for the poor, based on her experience with flood risk hedging in Bangladesh. Micro insurance against rapid onset natural hazard disasters is probably the area offering the greatest challenges, and alternative approaches need to be explored.

Summarizing, insurance has been shown by this literature review to be a useful instrument in fostering inclusive economic growth (although this effect varies by class of insurance) and in helping the poor to escape poverty traps. While the policy settings that support the development of the insurance sector are now reasonably well understood, which theoretically pay out quickly? More work needs to be done on understanding transmission mechanisms in order to better focus developmental efforts. In this regard the review has highlighted a potential nexus between credits and insurance that requires further investigation, as the two in tandem appear to be more potent than when developed separately. Finally insurance is an essential element in the suite of funding mechanisms required to deal with rapid onset natural disasters and offers major opportunities for the development organizations to add value for their partner countries.

Outreville (2013) identifies more than 70 papers that examine the factors that influence insurance sector growth. The World Bank has produced the most recent paper in this sequence (Feyen, Lester and Rocha, 2013), using fully disaggregated AXCO data (life v. P&C) and a number of structural variables for the first time. This section draws on the Outreville literature review with an initial overview from the Feyen et al paper.

In the review of the empirical researches on the linkage between insurance and economic growth, we provide information on the samples according to the period of time and country/countries coverage, the measures of insurance variable, the methods of estimation and the results. Although there are empirical studies on the insurance-growth nexus, where the dependent variable is insurance, while economic growth is explanatory variable, our primarily focus is the relationship between those two variables in the opposite direction. Therefore, we provide a review of empirical researches on the impact of insurance on economic growth. Ward and Zurbruegg (2000)

examine causal relationship between growth in insurance activity and economic growth for nine OECD countries during the period from 1961 to 1996. The annual real GDP is used as a measure of economic activity and annual total real insurance premiums as a measure of insurance activity. The authors apply bivariate VAR methodology to test for Granger causality.

Causality tests from vector auto-regressions in levels show that the insurance activity leads economic growth in two countries (Canada and Japan), while in the case of Italy there is a bidirectional relationship between insurance and economic activity. However, this relationship is weaker and less significant than for two above mentioned countries. For all other countries there is no evidence for the interaction. Causality tests from the error-correction models show similar results as previous tests. Exceptions are Australia and France for which results show some kind of connection. The authors conclude that the causal relationships between insurance and economic growth might well vary across countries because of the influence of number of country specific factors, such as cultural, regulatory and legal environment, the improvement in financial intermediation and the moral hazard effect in insurance.

Webb, et al. (2005) analyze the effect of banking and insurance on the growth of capital and output based on cross-country data of 55 countries for the period from 1980 to 1996. The insurance variable is measured by average insurance penetration (insurance premiums relative to GDP) of life and non-life insurance respectively. At the first stage they use ordinary least squares estimation method, while at the later one an iterated three stage least squares simultaneous estimation. The results of the first estimation, assuming exogenous financial variables, indicate positive effect of banking development on economic growth, while insurance variables do not enter significantly. The results of simultaneous equations, assuming endogenous relationship between financial activity and economic 35 International Research Journal of Finance and Economics - Issue 34 (2009) growth, show that higher levels of banking and life insurance penetration predict higher rates of economic growth. Concerning the other direction of the relationship, economic growth affects life insurance penetration, while it does not predict banking development. There is no link between non-life insurance and economic growth in any direction.

Kugler and Ofoghi (2005) examine long-run relationship between insurance market size and economic growth in United Kingdom for the period from 1966 to 2003 for long-term insurance, and for the period from 1971 to 2003 for general insurance (from 1991 to 1997 for marine-aviation-transport insurance and reinsurance). In comparison to Ward and Zurbruegg, who use aggregate variable in their estimation (total written premiums) because of which there is possibility of co-integration, this study use disaggregated data for the measure of market size. Namely, net written premium for each market in insurance industry in the United Kingdom is used as a measure of market size for that market. The market is divided into long-term insurance market, that includes life insurance, annuities, individual pensions and other pensions, and general business insurance market including motor, accident and health, liability, property, pecuniary loss, marine, aviation and transport insurance and reinsurance. Using Johansen's cointegration tests the authors find a long-run relationship between development in insurance market size and economic growth for all components of insurance.

Causality tests show that there is a long-run causality from growth in insurance market size to economic growth for eight out of nine insurance markets (the exception is pecuniary loss insurance). Causality in short-run exists from life, liability and pecuniary loss insurance to economic growth. There is an evidence of bidirectional causal relationship in the long-run between economic growth and insurance market size for the three insurance categories, with more powerful causality from economic growth to insurance development than the causality from the other direction.

Another empirically country-case analysis is the one by Adams et al. (2005) which examines the dynamic historical relation between banking, insurance and economic growth in Sweden in the period from 1830 to 1998. Insurance development is measured by annual aggregate (non-life and life) insurance premiums. They use time-series data and econometric tests for cointegration and Granger causality. The results show that the development of banking, but not insurance, preceded economic growth during the nineteenth century, while it was reversed in the twentieth century. Insurance development appears to be driven more by the pace of growth in the economy rather than leading economic development over the entire period of analysis.

Arena's (2008) empirical study on causal relationship between insurance market activity and economic growth includes 56 countries (both developed and developing ones) in the period from 1976 to 2004. Insurance premiums are used as proxies of total and life and non-life insurance activity separately. As an estimation method, the author uses the generalized method of moment for dynamic models of panel data. The results show a positive and significant effect of total, life and non-life insurance market activity on economic growth. Impact of life insurance on economic growth is driven by high-income countries only. In the case of non-life insurance, its impact is driven by both developed and developing countries, but it is larger in developed countries than in the developing ones. The

author also examines the possibility of non-linear effects of life and non-life insurance variables on economic growth, but the results do not show the non-linearity in the relationship.

## THEORY OF FINANCIAL INTERMEDIATION AND ENDOGENOUS GROWTH THEORY

In order to explain arguments for existence of financial intermediaries, the theory of financial intermediation adds specific frictions to models of resource allocation based on the perfect market. Namely, if there is the perfect market, all the traders are price takers, there is no private information, and allocation of resources is Pareto optimal. Thus, in a pure neoclassical framework there is no role of financial intermediation to add value. But, according to the traditional theory of financial intermediation the real-world market is characterized by frictions that include transaction costs and asymmetric information. The reduction in transaction costs, as the main function of financial intermediaries, was first introduced by Gurley and Shaw (1960). Financial intermediaries have an advantage over direct financing in economies of scale that result from costs shared. Additionally, large amount of funds enables financial intermediaries to be more easily diversified than individual economic units. An alternative argument for the existence of financial intermediaries is information asymmetry that was first suggested by Leland and Pyle (1977). According to their theory, financial intermediaries are information collectors of borrowers' financial prospects ex-ante for solving the problem of adverse selection. Financial intermediaries can signal their informed status by investing their wealth in assets about which they have special knowledge. Financial intermediaries act as delegated monitors to overcome ex-post asymmetric information and in that way reduce the problem of moral hazard.

Because of the changes in financial environment related to deregulation, improved provision of information through technological progress, and financial innovation, which have been resulted in reduction of transaction and information frictions, while at the same time financial intermediation has been growing, Allen and Santomero (1998) suggest improvements in the traditional theory of financial intermediation. According to their view, the theory should also take into account risk management activities of financial intermediaries and reduction of participation costs.

In order to encompass both traditional financial intermediation theory and the changes in the financial environment, and to understand the role of insurance companies in financial system and their contribution to economic growth, we are going to use  the functional approach to the financial system proposed by Merton and Bodie (1995). They emphasize six core functions: the provision of means for clearing and settling payments to facilitate exchange of goods, services and assets, the provision of a mechanism for the pooling of resources and the subdivision of shares in various enterprises, resource allocation, provision of means of risk managing, providing price information to help coordinate decentralized decision-making in various sectors of the economy, providing means to deal with the incentive problems created when one party to a financial transaction has information that the other party does not, or when one party acts as an agent of the other.

For the purpose of analyzing insurance companies in the context of their contribution to economic growth, these functions could be expressed as insurance, resources accumulation and their allocation with managing various financial risks and facilitation of exchange. By realization of these functions insurance companies could contribute to economic growth. Linking of financial intermediaries' functions, and thereby functions of insurance companies too, and economic growth, was enabled by the development of endogenous growth theory. In order to show the channels through (which) financial development affects economic growth we follow Pagano (1993). According to the endogenous growth "AK" model economy produces a single good and aggregate output Y in period t is function of the aggregate capital stock K:

The model shows three channels from financial development to economic growth: the marginal productivity of capital, the proportion of saving funneled to investment, and the savings rate. The other view of the theory of endogenous growth, namely the Schumpeterian growth models, is focused on technological innovations as channel through which the growth could be affected.

Therefore, we could add, to the above mentioned channels that connect financial intermediation to economic growth, another one, the rate of technological innovation. Since the insurance companies act as financial intermediaries, the same channels connect their functions with economic growth.

## RESEACH METHOD

## RESEARCH DESIGN

The research design is the structure in which research is conducted. A research design is the arrangement of conditions for the collections and analysis of the data in a manner that aims to combine to the research purpose. It constitutes the collection, measurement and analysis of data. Therefore, this section presents the research methods of carrying out the objectives specified in this study. It presents the population of study, Sources of data, Method of

data analysis, Description of Research Variables. It also contains a detailed outline of systems of modelling equations that will be used to capture the objectives of this study.

## SOURCES OF DATA

This study relied basically on secondary data which are obtained from Central Bank of Nigeria statistical bulletin (CBN) and National Insurance Commission (NAICOM) annual report from 1981 to 2011.**Note:** The annual report of National Insurance Commission for 2012, 2013, 2014, 2015, 2016, 2017 and 2018 were not yet released, that was why the data only covered 1981 to 2011. This is considered sufficient to produce robust and generalizable results.

## METHOD OF DATA     ANALYSIS

In this research, the type of data analysis that will be employed is inferential statistics ( i.e  parametric statistics ), such as multiple regression analyses.

Several authors have also used this approach in their works (see. Reinhart and Tokatlidis, 2000; Adam, 2007). To achieve the stated objectives, the insurance efficiency equation will be employed in order to examine the impact of insurance companies on the efficiency of financial intermediation in Nigeria.

## MODEL SPECIFICATION

To achieve the objectives of this study, the model concentrates on the efficiency of insurance companies in Nigeria which is stated below:

## INSURANCE EFFICIENCY EQUATION

**TC = a + biTI + biiOE + U**

**Where   TC = Total Insurance Claims**

**TI = Total Insurance Income**

> **OE = Other Insurance Expenditure**
> **a = Intercept Parameter**
> **b = Slope of regression line**
> **U= Stochastic terms**

## DISCRIPTION OF VARIABLES

1. **TOTAL INSURANCE CLAIMS:** An insurance claim is a formal request to an insurance company for coverage or compensation for a covered loss or policy event. The insurance company validates the claim and, once approved, issues payment to the insured or an approved interested party on behalf of the insured. The claims can be life or non-life insurance.
2. **TOTAL INSURANCE INCOME:** Total insurance income includes total direct life and non-life insurance premium income, Interest dividend, rents and other receipts.
3. **OTHER INSURANCE EXPENDITURE:** Other insurance income refers to insurance sending's other than claims. This includes Management expenses, Net commission and other expenses.

## DATA PRESENTATION

TOTAL INSURANCE CLAIMS, TOTAL INSURANCE INCOME AND OTHERS INSURANCE EXPENDITURE.

| *YEARS* | TOTAL INSURANCE CLAIMS (LIFE+NON-LIFE INSURANCE) IN #'MILLIONS | TOTAL INSURANCE INCOME   IN #'MILLIONS | OTHER INSURANCE EXPENDITUREIN #'MILLIONS |
|---|---|---|---|
| 1981 | 74.2 | 240.7 | 100.5 |
| 1982 | 79.2 | 259.5 | 110.4 |
| 1983 | 78.6 | 228.6 | 134.8 |
| 1984 | 77.7 | 237.6 | 110.3 |
| 1985 | 64.0 | 205.1 | 132.7 |
| 1986 | 86.4 | 263.7 | 135.8 |
| 1987 | 109.4 | 420.0 | 158.5 |
| 1988 | 151.1 | 506.7 | 206.4 |

| 1989 | 278.9 | 701.8 | 298.5 |
| 1990 | 306.5 | 1048.4 | 388.6 |
| 1991 | 386.9 | 1334.2 | 570.9 |
| 1992 | 613.9 | 2517.9 | 1157.6 |
| 1993 | 2684.1 | 5901.3 | 3291.6 |
| 1994 | 1315.3 | 14671.7 | 2483.6 |
| 1995 | 1508.9 | 14587.6 | 3856.2 |
| 1996 | 1654.1 | 13150.6 | 4262.1 |
| 1997 | 1677.3 | 16519.0 | 4822.1 |
| 1998 | 1956.2 | 17846.5 | 5218.1 |
| 1999 | 5923.2 | 14643.9 | 0.0 |
| 2000 | 5629.5 | 22531.5 | 0.0 |
| 2001 | 6110.5 | 28981.3 | 0.0 |
| 2002 | 6856.1 | 37765.9 | 0.0 |
| 2003 | 9415.2 | 43944.7 | 0.0 |
| 2004 | 12084.0 | 50495.9 | 0.0 |
| 2005 | 12402.4 | 67746.3 | 0.0 |
| 2006 | 76276.1 | 82361.9 | 0.0 |
| 2007 | 25133.2 | 105379.3 | 0.0 |
| 2008 | 37412.6 | 157206.0 | 0.0 |
| 2009 | 61969.1 | 189960.5 | 0.0 |
| 2010 | 53815.4 | 200376.0 | 0.0 |
| 2011 | 60204.8 | 233752.9 | 0.0 |

**SOURCE: CBN Statistical Bulletin (December, 2016) and National Insurance Commission (NAICOM) Annual Report.**

**PRESENTATION OF RESULTS (Insurance efficiency equation)**

$$TC = a + b_i TI + b_{ii} OE + U$$

**Where   TC = Total Insurance Claims**

      **TI = Total Insurance Income**

    **OE = Other Insurance Expenditures**

    **a = Intercept Parameter**

    **b = Slope of regression line**

    **U= Stochastic terms**

**Variables Entered/Removed[b]**

| Model | Variables Entered | Variables Removed | Method |
|---|---|---|---|
| 1 | OE, TI[a] | . | Enter |

a. All requested variables entered.

b. Dependent Variable: TC

**Model Summary[b]**

| Model | R | R Square | Adjusted R Square | Std. Error of the Estimate | Change Statistics R Square Change | F Change | df 1 | df 2 | Sig. F Change | Durbin-Watson |
|---|---|---|---|---|---|---|---|---|---|---|
| 1 | .884[a] | .781 | .765 | 10445.69726 | .781 | 49.955 | 2 | 28 | .000 | 2.399 |

a. Predictors: (Constant), OE, TI

**Model Summary[b]**

| Model | R | R Square | Adjusted R Square | Std. Error of the Estimate | Change Statistics | | | | | Durbin-Watson |
|---|---|---|---|---|---|---|---|---|---|---|
| | | | | | R Square Change | F Change | df 1 | df 2 | Sig. F Change | |
| 1 | .884[a] | .781 | .765 | 10445.69726 | .781 | 49.955 | 2 | 28 | .000 | 2.399 |

b. Dependent Variable: TC

**ANOVA[b]**

| Model | | Sum of Squares | Df | Mean Square | F | Sig. |
|---|---|---|---|---|---|---|
| 1 | Regression | 1.090E10 | 2 | 5.451E9 | 49.955 | .000[a] |
| | Residual | 3.055E9 | 28 | 1.091E8 | | |
| | Total | 1.396E10 | 30 | | | |

a. Predictors: (Constant), OE, TI

b. Dependent Variable: TC

**Coefficients[a]**

| Model | | Unstandardized Coefficients | | Standardized Coefficients | T | Sig. | Correlations | | |
|---|---|---|---|---|---|---|---|---|---|
| | | B | Std. Error | Beta | | | Zero-order | Partial | Part |
| 1 | (Constant) | 1031.476 | 2656.186 | | .388 | .701 | | | |
| | TI | .284 | .030 | .866 | 9.463 | .000 | .882 | .873 | .837 |
| | OE | -.798 | 1.222 | -.060 | -.653 | .519 | -.285 | -.122 | -.058 |

a. Dependent Variable: TC

**ANALYSIS OF RESULTS (INSURANCE EFFICIENCY EQUATION)**
From the results of Insurance efficiency equation, the result shows that change in the total insurance claims (dependent variable) with respect to change in the total insurance income (independent variable) is not equal to Zero or Negative. This is stated below:

$\frac{\Delta TC}{\Delta TI} = 0.284$. This means that the dependent variable is directly related with independent variable.

The result also shows that change in the total insurance claims (dependent variable) with respect to change in the other insurance expenditure (independent variable) is Negative. This is stated below:

$\frac{\Delta TC}{\Delta OE} = -0.798$. This means that the dependent variable is inversely related with independent variable.

The Pearson product moment correlation coefficient (R) is 0.884. This means that there is a positive or strong correlation between dependent and independent variable.

The coefficient of determination (R-Squared or $R^2$) is 78.1%. This means that 78.1% variation in the dependent variable is explained by the independent variable and 21.9% of the variation in the dependent variable is explained by the disturbance term or error term. This disturbance terms are inflation, economic meltdown, low productivity, low profitability etc.

In other words, 78.1% variation in deposit rate is explained by variation in capital base. 21.9% variation in the dependent variable is explained by variation of the variables excluded from the model.

**TESTING FOR THE STATISITCAL SIGNIFICANTAT 5% (INSURANCE EFFICIENCY EQUATION)**
**Ho:        bβ**
**Ho:**There is no significant relationship between Total insurance claims and Total insurance Income, Total insurance expenditure in the Nigerian insurance sector.

**Decision**
t0.05 at (31 – 3) 28 degrees of freedom is significant at 0.701. The difference is significant, therefore H1 is accepted and Ho is rejected, meaning that bβ is not equal to zero i.e. there is significant relationship between the dependent and independent variable.

More so, analysis of variance (ANOVA) shows that there is significant relationship (p – value < 0.05; p - value = 0.000) between the dependent and independent variable.

**DISCUSSION OF FINDINGS (INSURANCE EFFICIENCY EQUATION)**
Having done a critical analysis of the data in this research work, it was discovered in this empirical investigation into the "Insurance companies and the efficiency of financial intermediation Nigeria" that there exist a positive or strong correlation between the dependent variable and independent variable in the insurance efficiency equation". This means that there exist a very strong relationship between dependent variable and independent variable.

The coefficient of determination of 78.1% in Insurance efficiency equation measures the strength of the relationship or cause effect relationship which means that 78.1% variation in the dependent variable is explained by the independent variable and 21.9% of the variation in the dependent variable is explained by the disturbance term or error term due to inflationary pressure, economic meltdown, low profitability etc.

Beside, in Insurance efficiency equation, Independent variables has been found as an increasing function of Dependent variable , this means that there is an increase in the level at which insurance companies fulfil their customers claims. When insurance companies fulfil their claims adequately, it means that there is efficiency in insurance company's activities.

The parameter of TI and OEin relationship with TC is statistically significant at 5%, this means that the variables is not equal to zero.

**CONCLUSION**
It is evident from the results of the study that the insurance management strategies adopted in Nigeria since the onset of economic reform programme have been geared towards making funds available to support the insured persons in the economy. In spite of all these effort, supply of insurance fund to the insured persons has not improved. Hence, an increased shortage of funds in the insurance sector. The tentative conclusions that can be drawn from these findings are that the neo-liberal economic policy prescription most often, failed to work through the postulated channels for developing countries like Nigeria. Thus, the policy package should only be adopted with modifications within the context of existing and prevailing social, macroeconomic and political situations in the country.

**RECOMMENDATIONS**
Indications are that, the insurance companies are flush with excess liquidity through their customer's premium, so there will be some aggressive competition for profitable insurance business.  However, these payoffs are not significantly manifesting in the Nigerian insurance business. The study therefore recommends that:
- Policies should be formulated to address firm-specifics and macroeconomic fundamentals that will drive down the high wedge between total insurance claims and total insurance income to further strengthen the efficiency of financial intermediation which will impact positively on economic growth.
- There is need to strengthen the supervisory framework to curb tendencies for rent seeking behaviour of insurance companies management.
- There is need to strengthen the overall financial system with which the insurance sector operates, if the potentials of the insurance sector will be fully realized.

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