INSURANCE DEVELOPMENT AND ECONOMIC GROWTH IN NAMIBIA

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ABSTRACT

This study examined the relationship between insurance development and economic growth in Namibia. The study employed the autoregression distributive lag modelling approach based on quarterly data covering the period of 1991Q1 to 2015Q4. Other time-series techniques such as unit root test and co-integration were also used. The variables that were used included, insurance and financial services as percentage of exports, insurance and financial services as percentage of imports, FDI net inflows and real interest rate. The findings from the study revealed a negative and statistical insignificant relationship between insurance and financial services as percentage of exports and economic growth. There is also a negative and statistical insignificant relationship between insurance and financial services as percentage of imports.

Keywords: insurance development, economic growth, namibia

INTRODUCTION

The insurance industry has been changing and growing simultaneously in developed, emerging and developing economies. Moreover, the insurance sector contributes immensely to economic growth. There is an indication in the past years that human activity overall continue to grow in all categories of risk increases. This is seen as a result from the relationship that the insurance industry has with all other sectors such as mining, agriculture, transportation, trade, industrial etc. for both local and international economies (Olalekan & Taiwo, 2013).

Insurance has been a pillar that protects people's interests from the unknown losses and uncertainties that can occur in their lives. Therefore, it can broadly be defined as a social scheme established to reduce or to either eradicate risk of loss to life and property (Chand, 2014).

Insurance plays a significant role in countries especially the impact that it has on economic growth, just like other determinants of economic growth and its importance has been recognized for many years now. Although insurance is said to be a very important economic factor for a country's growth, its role has not been considered that much considering the studies that are usually conducted on banks by different scholars.

One of the essential characteristic of economic growth is a sound national insurance and a stable reinsurance market (Kugler & Ofoghi, 2005). Haiss and Sümegi (2006) also confirms this point by stating that countries which enjoy faster and more stable long-run growth are the ones with better developed financial systems. This is evident in both theoretical and empirical evidence. Furthermore, insurance industries have the duty to develop financial institutions and reduce uncertainties by improving financial resources. It further generates funds by collecting premiums and these funds are later invested in government securities and stock. These funds are further used in the industrial development of a country and then it impacts the economic development of a country positively. Insurance does not only protect stakeholders against risks and uncertainties, but it provides an investment channel as well. For example, life insurance enables systematic savings due to payment of regular premium (Chand, 2014).

Comparing Namibia's insurance sector with other sub-Saharan African insurance sector markets, Namibia's insurance sector is fairly well-developed compared to these countries. There is a strong indication in the growth of this sector in the parts of personal accidents and motor vehicle insurance; and this might assist the non-life sector which is less developed in the country for it to also exhibit significant growths. It is projected that, in the next few years investors could influence a fairly forceful macroeconomic and a healthy environment for consumer spending because of the introduction of new distribution and product innovation strategies as well as the fact that many households have never purchased insurance coverage before (BMI Research, 2016). The insurance sector plays a significant role in the developing and expanding the capital markets in Namibia and for that it is also credited for the development of the Namibia Stock Exchange. It is categorized in the micro-finance sector of the country and their main task is that they ensure that there is protection and education for the ordinary Namibians who mainly have been excluded from the country's formal banking system. They protect and educate them from/on the abuse emerging from the providers of financial services and products.

According to the Bank of Namibia (2016), Namibia's real gross domestic product (GDP) is projected to slow down to 4.4 percent in 2016 before it is to accelerate to 5.4 percent in 2017 and such an action will posture a challenge to the local insurance sector in that particular period. The country's economic growth in 2015 was 5.7 percent including an increase in the country's inflation to 7.4 that is by the end of 2017 (MOF, 2016). This effect will hit the insurance sector

negatively causing a rise in the interest rates and the impact of inflation will put a strain on disposable income. As a result, it is feared that people will tend to cancel their insurance policies and either not meeting their payment terms (Chirara, 2016).

Secondly, companies manage a large percentage of the short-term insurance industry from abroad and this is one of the main challenges facing the insurance industry. According to Roux (2015) this meant that foreign companies and different regulatory regimes mainly influenced the local short-term insurance industry. There are few opportunities to develop talented individuals to become insurance professionals who are currently just insurance technicians. Failure to develop these skills in the local people will not be beneficial to the country in the long-term.

The paper is organized as follows: the next section presents a literature review. Section 3 discusses the methodology. The empirical analysis and results are presented in section 4. Section 5 concludes the study.

LITERATURE REVIEW

The link of insurance development to economic growth is mainly based on financial intermediaries which is good as saying that the insurance sector is also a financial investor or it forms part of the financial global market as well (Scholtens & Wensveen, 2003). The current theory of financial intermediation states that intermediaries have a function to reduce transaction costs and information asymmetries. The theory becomes useless when transaction costs and information asymmetries are reduced by the developments in deregulation, information technology etc. and; this contradicts the scholars' view of seeing financial intermediation as an important and positive contribution to economic growth. Therefore, the theory fails to point out a strong reason of why financial intermediaries exist (Scholtens & Van Wensveen, 2003).

The new growth theory by Romer (1986) indicates that continuous increases in new knowledge and technology in an economy increases economic growth other than just increases in capital or labour. The theory allowed the integration of finance with economic growth models. The idea of this theory is that knowledge is used instead of resources because knowledge can be accumulated with no limits since it can be infinitely shared and reused. Endogenous growth theory states that the better the technology the higher it raises output, but it also creates new capital investment opportunities. They also showed that good performance of economic growth was mainly driven by financial development, technology and income distribution of that particular economy (Bednarczyk, 2013). The theory has emphasised how individual sector's investment and growth benefits other areas of the economy by providing positive externalities to such sectors (Hussels, Ward & Zurbruegg, 2005).

Many studies have been conducted on the relationship between insurance development and economic growth in mainly developed countries but few in Africa and mainly none in Namibia. In Austria, Haiss and Sümegi (2006) conducted a study on the relationship of insurance and economic growth used a cross-country panel data analysis for the 29 European countries for the period 1992 to 2004 using annual insurance premium data. They found out that there was weak evidence indicating a growth-supporting role of life insurance. On the contrary, Ćurak, Lončar and Poposki (2009) examined the relationship between insurance sector development and economic growth in 10 transition European Union member countries, using data for the period 1992 to 2007. They applied the fixed-effects panel model and control for other relevant determinants of economic growth and endogeneity. The study revealed a positive relationship between the insurance sector development and economic growth.

Similarly, Njegomir and Stojić (2010) conducted a study to examine the impact of insurance on economic growth and the interaction of insurance and banking in promoting economic growth in ex-Yugoslavia region. The study used the fixed effects models for panel data for the period 2004 and 2008.The results from the study showed that insurers provide positive effects on economic growth when they both act as providers of insurance risk management and compensation and as institutional investors. In support of the previous findings, Ege and Saraç (2011) also examined the role of insurance in changing economic growth using data of 29 countries from 1999 to 2008. They adopted a panel data approach and the results revealed a positive relationship between insurance and economic growth. Similarly, Ojo (2012) used a fixed-effect model to analyse data for the period 1985 to 2009, but making use of the co-integration analysis and a Granger causality test. The study also found that insurance sector growth and development positively and significantly affects economic growth. The same results were also found by Verma and Bala (2013), who investigated the relationship between life insurance and economic growth in India. The authors employed ordinary least squares method on the data for the period 1991 to 2011.

Chang, Cheng, Pan and Wu (2013) examined the relationship between insurance development and economic growth in 7 Middle Eastern countries. The authors applied bootstrap panel Granger causality test on annual panel data set for the period 1995-2010. The results showed that the relationship between life-insurance development and economic growth can be significantly affected by country-specific factors such as life insurance. Moreover, macro-economic factors have bi-directional Granger causal relationship in higher income level countries.

In Nigeria, Yinusa and Akinlo (2013) analyzed both the long and short run relationship between insurance development and economic growth in Nigeria for the period 1986 to 2010. In employing the error correction model (ECM), the study revealed a long run relationship between insurance development and economic growth in Nigeria.

Zouhaier (2014) conducted a study on the relationship between insurance business and economic growth of 23 OECD countries over the period 1990-2011, using a static panel data model. The empirical analysis show a positive impact of non-life insurance on economic growth, while showed a negative effect exerted by the total insurance and non-life insurance on economic growth. Using a panel approach, Akinlo (2015) analysed the causal relationship between insurance and economic growth in sub-Saharan Africa covering annual data for the period of 1995 to 2011, for a panel of 30 countries. The Granger causality test was used to test for homogeneous non-causality and homogeneous causality hypotheses. The non-homogeneous test showed that there was a bi-directional causality between economic growth and insurance in sub-Saharan Africa. Generally, the result showed that there was no stable long-run relationship between insurance and economic growth. Similarly, Wanat, Papież and Śmiech (2016) used the period of 1993 to 2013 to investigate causal relationship between the insurance market development and economic growth in 10 transition European Union member countries. They used the bootstrap panel causality approach. They identified various types of dependencies between economic growth and the insurance market development.

Evidence from the literature indicates the importance of insurance development in the economy. Several studies on insurance development have found the same positive relationship with economic growth given their different econometric and statistical methods. Others showed negative relationship between insurance development and economic growth. But overall, all the most studies are inclined with the earlier findings. Theory on this subject is very limited but there is availability on the ones for economic growth driven by development on technology and human knowledge that are needed for an economy to growth. In terms of Namibia, there is no study about this subject and thus the paper intends to fill this gap.

METHODOLOGY

Econometric Framework and Model Specification

The study follows the methodology employed by Yinusa and Akinlo (2013). However, instead of using the usual Engle-Granger approach, the study will use the autoregression distributive lag model (ARDL). The linear specification of the model is given by:

$$lnR\text{GDP} = \alpha_0 + \alpha_1 lnIFSexpo + \alpha_2 lnIFSimpo + \alpha_3 lnFDI + \alpha_4 lnINT + e_t \qquad (1)$$

Where $lnRGDP$ represent real output, $lnIFSexpo$ represents insurance and financial services % of service exports, $lnIFSimpo$ represents insurance and financial services % of service imports, $lnFDI$ represents FDI net inflows, $lnINT$ represents real interest rate and e_t is the error term.

Equation (1) may be estimated using the Engle-Granger two-step procedure to obtain the coefficients of interest (for the regressors). However, it is not automatic, since most financial data are trended and they are potentially non-stationary. It is widely acknowledged in literature that regression analysis from non-stationary variables yield spurious (nonsensical) results. Hence, the first step is to investigate the unit root properties of the variables in question. This suggests that the econometric technique to be used for estimating Equation (1) will be dictated by the properties of time series data. There are numerous tests for unit root but the ADF and PP were used in this study.

Upon establishing that the series are stationary at levels, Equation (1) will be estimated using Ordinary Least Squares (OLS) technique. But should the series be found non-stationary at level, but stationary at first difference, the test of cointegration will be conducted to establish whether or not the pair of the series is cointegrated. If the pair of the first differenced stationary series is not cointegrated, then Equation (1) will be estimated with the first differenced series to avoid the problem of spurious regression. The bound test of cointegration is selected because of its advantage of testing for both long-run and short-run coefficient. The test assumed that all variables are endogenous and do not require all variables to be integrated of order 1. Hence, it can be applied irrespective of whether some variables are integrated of order 1 and some of order 0 in one set, or if all variables are integrated of order 1 completely (Dritsakis, 2011).

The results of the Bounds test present two critical values for cointegration test with their lower critical bound and upper critical bound. The lower critical bound suggests that all the variables are integrated of order zero I(0), meaning that there is no cointegration among variables. On the other hand, upper bound assumes that all the variables are integrated of order 1, meaning that the variables are cointergrated (Pesaran; Shin & Smith, 2001). H_o is rejected when the F-statistic is greater than the upper bound critical value and concludes that variables are cointergrated. If F-statistic is below the lower bound, H_o cannot be rejected, meaning there is no cointegration among variables. If F-statistic falls between upper and lower bound then the results are inconclusive (Senantsi, 2009; Sheefeni, 2013). If there is cointegration relationship among the variables, it can be re-parameterised as an Error-Correction Model (ECM) which will contain both short- and long-run effects. Following Hendry (1995), the error correction model is reparameterized as:

$$\Delta lnrGDP_t = \alpha_0 + \sum_{i=1}^{P} \Delta lnrGDP_{t-i} + \sum_{i=1}^{p} \beta_i \, \Delta lnIFSexpo_{t-i} + \sum_{i=1}^{P} \gamma_i \, \Delta lnIFSimpo_{t-i} + \sum_{i=1}^{P} \sigma_i \, \Delta lnFDI_{t-i} + \sum_{i=1}^{P} \theta_i \, \Delta lnINT_{t-i} + V_t \qquad (2)$$

In equation (2), λ is the speed of adjustment parameter and EC is the residual that are obtained from the estimated a long-run model. The error correction coefficient λ is expected to be less than zero, which implies cointegration relation.

Data and Data Sources

This study used quarterly time-series data covering the period 1991:Q1-2015:Q4. The variables included are the insurance and financial services % of service exports, insurance and financial services % of service imports, foreign direct investment net-inflows and interest rate. The data were obtained from the World Bank's website.

EMPIRICAL FINDINGS AND ANALYSIS

Unit Root Test

Testing for unit root was conducted using the Augmented Dickey-Fuller (ADF) and the Phillips-Perron (PP) tests. Table 1 shows the results for the ADF and the PP unit root tests for all the variables. The results shows that the variables GDP, FDI and INT are stationary in levels that is, integrated of order zero I(0). The other variables became stationary after differencing tem once.

Table 1: Unit Root Test: ADF and PP in Levels and First Difference

Variables	Model	ADF test		PP test		Order of Integration
		Levels	First difference	Levels	First difference	
lnGDP	Intercept	-4.549**	-5.914**	-3.255**	-5.478**	I(0)
	Intercept and Trend	-5.084**	-5.924**	-3.532**	-5.457**	
lnFDI	Intercept	-3.357**	-4.343**	-3.047**	-3.942**	I(0)
	Intercept and Trend	-3.322**	-4.311**	-3.031**	-3.917**	
lnifsexpo	Intercept	-2.513	-3.901**	-2.950**	-4.563**	I(1)
	Intercept and Trend	-2.360	-3.978**	-2.616	-4.630**	
lnifsimpo	Intercept	-2.075	-3.738**	-1.994	-4.723**	I(1)
	Intercept and Trend	-2.245	-2.469	-2.099	-4.700**	
lnINT	Intercept	-3.185**	-5.324**	-2.869	-5.085**	I(0)

	Intercept and Trend	-4.088**	-5.649**	-2.888	-5.076**	

Source: Author's compilation using values obtained from Eviews. Notes:

Bound Cointegration Test

The Bound co-integration test was used to test for the possible existence of any long run relationship.

F-stat = 7.13 was compared with the Pesaran critical value at 5 percent level of significance, with an unrestricted trend with no constant. The decision rule is that when the F-stat is more than the upper bound value, the nreject H_0. In this case, the upper bound value is 3.79 and lower bound value is 4.85. Thus, reject the null hypothesis since 7.13 is > 3.79. This suggests that the variables in the model have a long-run association (the variables move together in the long-run).

The Error Correction Model using the ARDL approach

The unrestricted error correction model of ARDL model which is used to examine the long run and the short run relationship is presented in the following form:

$\Delta lnrGDP - 0.0034 + 0.581\,\Delta lnrGDP_1 - 0.00052\,\Delta lnrGDP_2 - 0.073\,\Delta IFSexpo_1 +$

$0.256\,\Delta lnIFSexpo_2 - 0.096\,\Delta lnIFSimpo_1 + 0.307\,\Delta lnIFSimpo_2 + 0.039\,\Delta lnFDI_1 -$

$0.0148\,\Delta lnFDI_2 + 0.028\,\Delta lnINT_1 + 0.0074\,\Delta lnINT_2 - 0.2339\,V_1$

$R^2 = 0.4280$ F-stat = 5.578

D-W stat = 2.036   Prob. (F-stat) = 0.0000

After estimating the error correction model using the ARDL approach, the variables in the model depicted that they were serially independent and the model was stable. The lag variable of IFSexpo and IFSimpo in the previous quarters of 0.256 and -0.096 percent indicates that the one percent increase in the IFSexpo and IFSimpo led to the 25.6 and 0.96 percent decline in the country's real GDP in those years respectively. The error correction term is in-line relation with theory due to the fact that it is negative and significant. The interpretation is that, real GDP adjusts towards its long-run equilibrium at the rate of 23.39 percent in the next quarter. From the analysis above, lag 1 of real GDP is found to positively and significantly affect the current real GDP over the period of study. The lagged values of interest rates both lag 1 and lag 2 have

positive effect on economic growth which is consistent with the findings of Yinusa and Akinlo (2013). The coefficient for the variable interest rate is not significant in this model. The lagged FDI has a positive impact on the GDP of Namibia in the long run similar to the findings of Javaid (2016) in Pakistan. The model shows that the total variation in the dependent variable is about 43 percent. The DW value of 2.036 shows no problem of autocorrelation in the model.

CONCLUSION

This study looked at the relationship between insurance development and economic growth in Namibia. The reason for conducting the study was to establish whether it is important to foster and invest in the Namibian insurance sector as well since it is also an important contribution to the national GDP. The variables that were used included, insurance and financial services as percentage of exports, insurance and financial services as percentage of imports, FDI net inflows and real interest rate. The study employed the autoregression distributive lag modelling approach based on quarterly data covering the period of 1991Q1 to 2015Q4. Other time-series techniques such as unit root test and co-integration were also used. The findings from the study revealed a negative and statistical insignificant relationship between insurance and financial services as percentage of exports and economic growth. There is also a negative and statistical insignificant relationship between insurance and financial services as percentage of imports. These results have to be interpreted with caution because they might not fully represent the insurance sector. This study shows some incomplete number of the main variables such as gross premium income that determines the level of insurance in the country; this was due to lack of availability of data on such variables. Future studies should make use of such variables when data become available in order to compare the results.

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