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Insurance-growth nexus in Ghana: An autoregressive distributed lag bounds cointegration approach

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Abstract

This paper examines the long-run causal relationship between insurance penetration and economic growth in Ghana from 1990 to 2010. Using the autoregressive distributed lag (ARDL) bounds approach to cointegration by Pesaran et al. (1996, 2001), the study finds a long-run positive relationship between insurance penetration and economic growth which implies that funds mobilized from insurance business have a long run impact on economic growth. A unidirectional causality was found to run from aggregate insurance penetration, life and non-life insurance penetration to economic growth to support the 'supply-leading' hypothesis. The findings have implications for insurance market development in Ghana.

JEL classification: C22 ;G22 ;O11 ;O16

Keywords: Insurance; Economic growth; ARDL; Causality; Ghana; Africa

1. Background of the study

The importance of insurance business is not only limited to risk absorption, allocation and transfer but also the mobilization of funds for use by financial markets to induce investment and growth. Despite the obvious benefits of the insurance businesses to an economy, insurance penetration among African countries[2] still remain very low.[3] This does not only hinder the continent from optimizing the benefits of insurance activities to businesses and individuals but also results in the loss in the ability of these developing countries to mobilize the funds from insurance business for the usage by financial markets. The growth in global insurance premiums by 82%[4] between 1997 and 2004 was driven by emerging markets with growth rate of 57% compared to 27% for industrialized countries (Arena, 2008). This underlines the growing importance of the insurance industry globally and more importantly in emerging markets as a means for capital accumulation. This has accordingly shifted the focus of academic researchers to the examination of the impact of insurance market development on economic growth from authors such as Ward and Zurbruegg (2000), Webb et al. (2002), Liedtke (2007) and Arena (2008).

With the long held proposition that finance has a major role to play in economic growth, little is known empirically on the impact of insurance on the growth of African economies. The transmission mechanism between the finance-growth nexus has been hypothesized to be either 'supply leading' which asserts that economic growth is caused by developments in the financial sector or 'demand following' where financial development is granger caused by economic growth. The impact of banking and stock market developments on economic growth has received enormous attention in finance-growth nexus literature (King and

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1 Tel.: +233 264766174.

2 Excluding South Africa.

3 Insurance penetration in Africa was 1.2% in 2011 (Swiss Re, 2012).

4 104% and 60% growth in the life and non-life businesses, respectively. Computations were based on data from Swiss Re.

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Levine, 1993a,b; Levine, 1999; Levine and Zervos, 1998; Beck and Levine, 2004; Adjasi and Biekpe, 2006; Seetanah et al., 2009) in both developed and developing countries.

Similar to studies on the banks and stock markets, the causality between insurance penetration and growth still remain inconclusive. While some studies have found causality running from insurance to growth (Ward and Zurbruegg, 2000; Ghosh, 2013; Chang et al., 2013) others have found causality from growth (Horng et al., 2012; Chang et al., 2013) with some finding evidence of bi-directional causality between insurance penetration and growth (Ward and Zurbruegg, 2000; Lee, 2011; Chang et al., 2013). Other studies have also found no evidence of causality (Chang et al., 2013). Despite the importance of insurance to the stability of financial systems[5] through the provision of risk management services, little is known of its linkage with growth in Africa. The studies examining insurance-growth nexus have mainly been based on data from developed economies (Kugler and Ofoghi, 2005; Han et al., 2010; Lee, 2011). Most studies examining the finance-growth nexus in Africa (Adjasi and Biekpe, 2006; N'Zue, 2006; Odhiambo, 2007; Seetanah, 2009; Ahmed and Wahid, 2011; Kagochi et al., 2013) have focused on bank and stock market development. Although few studies have been carried out on the insurance industry in Ghana (Akotey et al., 2011, 2013; Ansah-Adu et al., 2012; Akotey and Abor, 2013), they have mostly focused on micro level characteristics. None of the studies has thus far explored the relationship with economic growth let alone the causal link between the two. This study therefore pioneers the study on insurance markets at the macro level in Ghana. While the insurance-growth nexus has varied in the developed country studies, to the best of author's knowledge, no study has explored the causality between insurance and growth in an African context. This study therefore seeks to fill this obvious gap in empirical literature by providing further evidence on causal link between insurance penetration and economic growth from a developing African country.

In recognition of the need for this study, the autoregressive distributed lag (ARDL) bounds approach to cointegration was employed to test for the existence of level relationship between insurance penetration and economic growth as well as estimating both short-run and long-run relationships. Additionally, the fully modified ordinary least squares (FMOLS) of Phillips and Hansen (1990) was also employed to test the robustness of the of the long-run ARDL estimates. These two techniques have been found to be reliable for small sample sizes estimations as employed in this study. Finally, causality test was employed to test the 'demand-following' and 'supply-leading' for insurance-growth in Ghana.

The main results of this study indicate that aggregate insurance consumption has long-run positive impact on economic growth whereas non-life insurance activities contributes to higher economic growth compared to life insurance activities in the long-run. Additionally, causality test finds evidence in support of the 'supply-leading' hypothesis in respect of aggregate insurance consumption, life and non-life insurance consumption to imply that developments in insurance markets precedes economic growth in Ghana.

The rest of the paper is organized as: Section 2 provides an overview of insurance penetration in Ghana, Section 3 examines the theoretical basis and empirical studies on insurance-growth nexus. Section 4 outlines the methodology on the ARDL approach to cointegration. Section 5 discusses the empirical results while Section 6 focuses on conclusions and policy implications of the findings.

2. Overview of insurance in Ghana

The Royal Guardian Enterprise Insurance[6] was established in 1924 to pioneer insurance business in Ghana. Subsequently, the Gold Coast Insurance Company, General Insurance Company and Cooperative Insurance Society were established in 1955, 1957 and 1958, respectively. A merger between Coast Insurance Company and Cooperative Insurance Society in 1962 led to the birth of the State Insurance Company (SIC). Currently, there are 25 Non-Life companies, 18 Life companies, 2 Reinsurance companies, 54 Brokerage companies, 1 Loss Adjuster, 1 Reinsurance Broker and about 4000 insurance agents (http://www.nicgh.org). First regulated under the Insurance Law 1989 (PNDC Law 227) and currently operating under the Insurance Act, 2006 (Act 724), the industry is regulated by the National Insurance commission (NIC). In the new Act, an upward review of the minimum capital requirement for an insurance company from the current cedi equivalent of US$1 million to the cedi equivalent of US$5 million. Table 2.1 presents the premium growth for both Life and non-life businesses from 2003 to 2011. While the non-life insurance business continues to generate more premium income compared to the life business, the share exhibited continuous decline. In 2003, total non-life insurance was 80.12% of gross insurance premiums compared to the life business of 19.88%. By end of 2011, the share of non-life business had fallen to 57.01% while that of the life business had rising up to 42.99% from 19.88% in 2003. This attest to growing importance of the life insurance sub-sector within the insurance industry.

As shown in Table 2.1, non-life premium income grew by 32.3% in 2011 whiles that of the life sector premium income grew by 44.2% in 2011 backing a trend of consistent growth from 2003 as depicted in the table. Overall, the growth in the life sub-sector has consistently out-grown the non-life sub-sector. The growth in the life businesses is attributed to high rate of product innovation and development in the life sub-sector which has shifted the focus of life policies from policies to cover for death to include includes endowment, funeral and other policies which serves as savings plans for policy holders.

In analyzing the investment portfolio of the industry over a snap shot period from 2010 to 2011, Table 2.2 shows that both life and non-life businesses has more short-term investments compared to their long-term investments. Life businesses however held more short investments compared to long-term

[5] Skipper (1997).

[6] Currently known as Enterprise Insurance Company Limited.