# Evaluating the Insurance Development-Economic Growth Nexus in Albania

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**Abstract**
This paper examines the impact of insurance market on economic development in Albania. We use macroeconomic data for the period 2006-2015 in order to answer a research question about the nexus between the insurance market development and economic growth. In our paper the dependent variable, GDP per capita, is analysed in relation to the following set of control variables: written gross premiums on life and non life insurance, government consumption, export and import of goods and services, human capital, and savings. Insurance premiums are used as a standard measure of insurance market development and in our research we disaggregate data for life and non-life insurance. The empirical results of our analysis are partially consistent with previous studies focused on developing countries. The correlation seems to be stronger between GDP per capita and non-life insurance, which is predominant in the Albanian insurance market. The research findings are important for the Albanian policy makers in order to foster economic growth, which is currently constrained by limited capital stock and excessive foreign debt burden.

Keywords: Insurance Market, Economic Growth, Granger Causality

JEL classification: G22, O16, C23

## Introduction

Insurance is a story as old as time. The development and increase of the insurance industry is attributed to the major influences of international trade, urbanisation and catastrophic events (Outreville J. F., 1990). The influence of insurance industry on the macroeconomic activity of a given

country can be analysed from two different points of view; first, its role in providing indemnification, and second, its role as an institutional investor.

At the macroeconomic level, the insurance industry contributes to the formation of national wealth by creating value added. The service offered by the insurance companies is that of an intermediary. According to the quantity of premiums collected less the liabilities incurred, this value added is apportioned for the payments of salaries and commissions, and other indirect expenses. The contribution of the insurance sector to employment exerts fundamental differences between developed and developing countries (Rejda, 2005).

Insurance is also a process of financial intermediation because the production cycle for insurance is reversed in the sense that the payment is made before the service is provided. To measure the contribution of insurance companies to the financing of the national economy, it would be sufficient to compare the increase in technical reserves or provisions with the economy's financial requirements (Outreville, 1996).

According to Arena (2008) insurance market activity may promote economic growth by allowing different risks to be managed more efficiently. This activity would encourage the accumulation of new capital and mobilize domestic savings into productive investments. However, this evidence mentioned raises questions regarding the impact that the faster growth of insurance markets would have on economic growth and vice-versa.

*Literature review*

Outreville (1990) can be considered a pioneer with his examination of the relationship between insurance development and economic growth for a sample of 55 developing countries for the period between 1983 and 1984. He finds that nonlife insurance demand is associated positively with GDP per capita and a measure of financial development represented by the ratio M2/GDP. Finally, in his study both non-life and life insurance generate economic growth.

The potential causal relationship between economic growth and insurance market activity for nine OECD countries for the period 1961–1996 has been examined by Ward and Zurbruegg (2000). In the study they use annual real GDP as a measure of economic activity and annual real total written premiums as a measure of insurance activity. Long-term relationships are found using a vector autoregression error correction

model on a country-by-country basis. The authors test the statistical significance of the coefficients on insurance for the long-run equation to assess causation between insurance and GDP growth for these countries.

Webb et.al. (2002) have carried out an empirical analyses on the relationship of banks, life, and non-life insurance activity on economic growth in the context of a revised Solow-Swan neoclassical of economic growth model. In their study the authors include financial activities as additional inputs in the production function, which is assumed to be a Cobb-Douglas type. The authors use the three-stage least squares instrumental variable approach 3SLS-IV, where the instruments used are the legal origin of the country for the banking measure, a measure of corruption and quality of the bureaucracy for the non-life insurance measure, and the religious composition of the country for the life insurance measure. They show that the exogenous components of the banking and life insurance measures are found to be robustly predictive of increased economic growth.

Using the generalized method of moments for dynamic models of panel data for 55 countries between 1976 and 2004, Arena (2008) found robust evidence for this relationship between insurance market activity and economic growth. Both life and non-life insurance have a positive and significant causal effect on economic growth. For life insurance, high-income countries drive the results, and for non-life insurance, both high-income and developing countries drive the results. Moreover, the author finds evidence of a relationship between life insurance and financial development for initial and intermediate stages of financial development. In the case of non-life insurance, Arena (2008) suggests a "complementarity" effect for initial and intermediate stages of stock market development.

Njegomir and Stojic (2010) examine the impact of insurance on economic growth using data from 5 countries which formerly were in ex-Yugoslavia region. They use the country-specific fixed effects models for panel data for the period 2004-2008 allowing each cross-sectional unit to have a different intercept term serving as an unobserved random variable. The results show that insurance market activity provides positive effect on economic growth both as providers of insurance risk management and indemnification and as institutional investors.

The lack of the previous research focused on the interaction between insurance industry development and economic growth in Albania, served us as a motivator for further investigation on this relationship. We

examine how insurance market development affects economic growth relying on previous international empirical studies.

*Insurance market development in Albania*

Until the end of the 1980s, insurance in state-planned economies was part of the state administration. The structure of the insurance industry in other eastern European countries has been largely following the Soviet model. All workers, employees and members of collective farms were subject to compulsory social and state economic benefits.

Actually, the insurance sector in Albania remains small and underdeveloped. It includes the private and state-owned insurance companies that provide insurance to individuals and businesses. According to the Albanian Financial Supervisory Authority (ASFA 2016) during 2015, the Albanian insurance market had a significant increase in terms of the total volume of gross written premiums (GWP), which reached the figure of 14.09 billion of ALL, increasing by about 21 percent if compared to the previous year.

With insurance consumption of €29 per capita in 2014, Albania lags behind all countries of Southeastern and Central Europe. During 2011-2014, the market experienced little growth in real terms mainly due to weak economic growth, lack of public awareness, low insurance education and fierce price competition among the insurers. The real growth of insurance premiums from 2009 to 2014 was only 9 percent, falling even below the cumulative GDP growth over the same period. As a result, insurance penetration measured as a ratio of GWP to GDP increased somewhat from 0.69 percent to 0.79 percent from 2009 to 2014.

The insurance market structure in Albania continues to be dominated by the non-life insurance, which brought about 92.61 percent of the total volume of GWP in this market. On the other hand, life insurance is about 7.30 percent of the total volume of gross written premiums as shown in figure 1. During 2015, the voluntary insurance was 39.76% and the mandatory was 60.24% according to the total gross written premiums in the insurance market. The list of products offered from the insurance market is shown in figure 2.

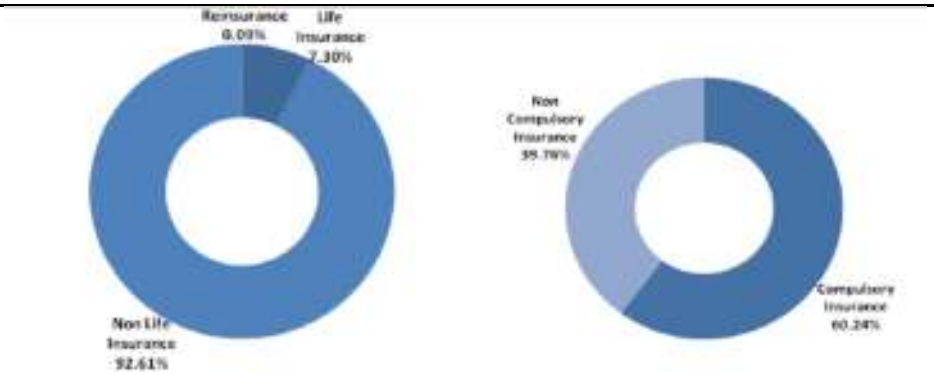



Fig. 1. Insurance Market Structure

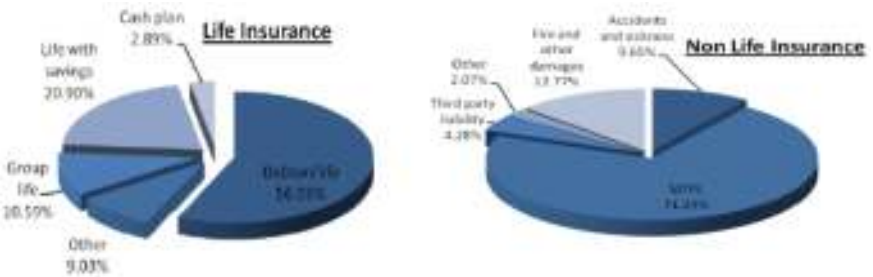



Fig. 2. Life and non-life insurance products

The density of the insurance premium per capita is an indicator of the degree of use of insurance products by the population. In 2015, the average premium per capita was 4.880 ALL (34.92 euro), an increase of about 861.36 ALL compared with the previous year. Per capita premium in non-life insurance averaged 4.519 ALL (32.34 euro) as shown in figure 3.

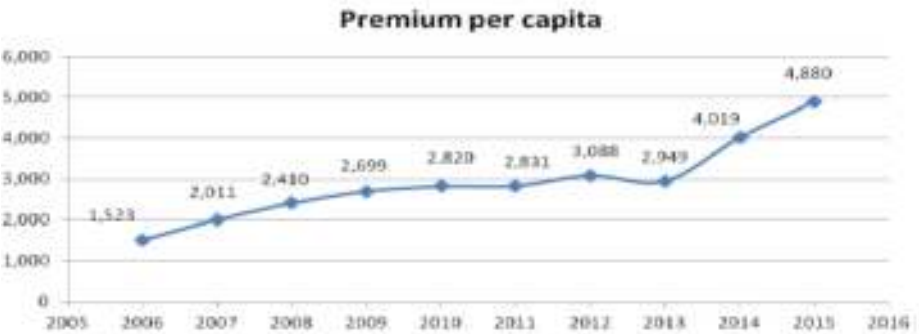



Fig. 3. Premium per capita in ALL (2006-2015)

The development of the sector has been hindered by lax insurance regulation, low disposable incomes, poor industry record of claims performance, the lack of trust in insurance among the public. The market claims ratio was only 36% as of the end of 2015, due to extremely high expenses. As a result, if the assessment of solvency were to be carried out based on adequate technical provisions, the solvency ratio for some insurers would drop below that allowed under the current solvency regulation.

Albania is also highly vulnerable to natural disasters and climate change. Yet, very few homeowners have earthquake insurance. Nevertheless, there is significant earthquake risk accumulations in insurers' balance-sheets, a major part of which comes from insurance of properties used as loan collateral by local banks (AFSA, 2016). Such risk accumulations require proper risk management to ensure that claims are paid in full and insurer remains solvent after the earthquake, which currently is often not the case.

## Methodology and data

To check to what extent the relationship between insurance development and economic growth in Albania is observed we statistically test the following equation:

$$Y_t = \beta_0 + \beta_1(LIP)_t + \beta_2(NLIP)_t + \beta_3(INF)_t + \beta_4(GOV)_t + \beta_5(OPEN)_t + \beta_6(HCAP)_t + \beta_7(SAV)_t + \varepsilon_t$$

In Table 1 we give definitions of the variables. The data on the life and non-life insurance premiums are obtained from the AFSA reports for the period 2006 to 2015. GDP, inflation rate, government spending, trade openness, human capital, and saving rate data are obtained from European Bank for Research and Development (EBRD) economic statistics in Transition Report, and from World Development Indicators (WDI) database of the World Bank.

Table 1. Definition and construction of variables

| Variables | Name | Definition and construction |
|---|---|---|
| *Dependent variable* | | |
| GDP per capita | Y | Log difference of the real GDP per capita |
| *Explanatory variables* | | |
| Life insurance | LIP | Life insurance premium divided by GDP (%) |
| Non-Life insurance | NLIP | Non-Life insurance premium divided by GDP (%) |
| *Control Variables* | | |
| Inflation rate | INFL | Annual change in CPI (%) |
| Government spending | GOV | Log of ratio of govern. spending to GDP |
| Trade openness | OPEN | Log of ratio of exports and imports to GDP |
| Human Capital | HCAP | Rate of secondary school enrolment |
| Savings rate | SAV | Gross savings as a share of gross national income (%) |

The analysis of the correlation between the variables identified has been achieved through the Pearson correlation coefficient (r) that shows the intensity and direction of the correlation as shown in Table 2.

| | GDP/cap | LIP | NLIP | INFL | GOV | OPEN | HCAP | SAV |
|---|---|---|---|---|---|---|---|---|
| GDP/cap | 1.00 | | | | | | | |
| LIP | 0.45 | 1.00 | | | | | | |
| NLIP | 0.83 | -0.03 | 1.00 | | | | | |
| INFL | -0.24 | -0.31 | -0.25 | 1.00 | | | | |
| GOV | 0.62 | 0.26 | 0.11 | -0.23 | 1.00 | | | |
| OPEN | 0.03 | 0.05 | 0.04 | -0.12 | 0.04 | 1.00 | | |
| HCAP | 0.73 | 0.21 | 0.34 | -0.11 | 0.07 | 0.22 | 1.00 | |
| SAV | 0.24 | 0.43 | 0.52 | -0.02 | 0.11 | 0.35 | 0.04 | 1.00 |

Table 2. Correlation Matrix

## Empirical results

Table 3 presents the estimated results of the model of equation by using the OLS estimator regressions. The corrected standard errors are reported using the command "xtabond2" in STATA. The two separate columns indicate the fact that we conducted two separate regressions separately

for the life and non-life penetration in order to capture the eventual differences.

As we can notice from the empirical results LIP and NLIP positively influence economic growth. The life insurance penetration coefficient is 0.002, meaning that a 1 percent increase in life insurance increases the economic growth by 0.002 percent. Similar results with a higher magnitude can be concluded for the non-life insurance.

Moreover, from the list of the explanatory variables, Openness and Human capital investment positively affect economic growth. These results are in line with the growth models tested in other economic contexts. On the other hand, Inflation, Government spending, and Savings have a negative impact on economic growth.

The Hansen and serial correlation tests do not reject the null hypothesis of correct specifications, meaning that we have valid instruments for the evaluation and no serial correlation. In this sense, we are able to support similar findings on the positive relation between insurance development and economic growth.

Table 3. Estimation Results

| **Explanatory variables** | **(1)** | **(2)** |
|---|---|---|
| LIP | 0.002* | |
| | (0.073) | |
| NLIP | - | 0.003*** |
| | | (0.000) |
| INFL | -0.235*** | -0.310*** |
| | (0.000) | (0.002) |
| GOV | -0.036** | 0.025*** |
| | (0.072) | (0.003) |
| OPEN | 0.010 | 0.023** |
| | (0.523) | (0.021) |
| HCAP | 0.081 | 0.073 |
| | (0.751) | (0.834) |
| SAV | -0.032** | -0.041** |
| | (0.004) | (0.007) |
| Specification test (p-values) | | |
| AR (1) | 0.003 | 0.005 |
| AR (2) | 0.326 | 0.410 |
| Hansen test | 1.000 | 1.000 |

*Note*: ***, **, and * indicate statistical significance respectively at 1,5, and 10 percent level or better.

To further investigate on the robustness of our results we examined the causal link between Gross Written Premium (GWP) and GDP growth based on Granger causality test. According to Granger, a time series Xt causes another time series Yt. If current Yt can be predicted better using past values of Xt, than by not doing so then all other relevant information like past Yt is taken into consideration in both cases. Appropriate lag lengths of relevant variables for tests of causality were determined by Akaike's final prediction error.

Table 4. Granger Test Estimations

| **Causality test** | **Number of lags** | **F-statistics** | **Probability** | **Chi-square** | **Probability** |
|---|---|---|---|---|---|
| Growth does not Granger cause GWP | 4 | 1.32 | 0.41 | 4.23 | 0.22 |
| GWP does not Granger cause Growth | 4 | 1.86 | 0.11 | 5.57* | 0.08 |

*Note*: ***, **, and * indicate statistical significance respectively at 1,5, and 10 percent level or better.

While the F-statistics as well as the associated probabilities do not allow us to reject the null hypothesis of no bi-directional causality between GWP and GDP growth, the chi-square shows a rejection of the null hypothesis. This means that while GWP granger causes the GDP growth, the inverse is not statistically significant.

## Concluding remarks

In this article we empirically investigate the relationship between the insurance development and economic growth in Albania by using the OLS estimation model for data over the period 2006–2015. In our study we conduct separate estimations for the life and non-life density. Among the main results obtained, in the basic model we first have found evidence of a positive effect of the development of the life and non-life insurance markets on economic growth. Moreover, we find evidence that economic growth is negatively affected by savings, and the inflation rate.

In addition, this study also offers several useful insights for policy makers and researchers. First, our findings have an important implication in terms of policy recommendations. If policy-makers continue to ignore the conditions which affect this relationship, then economic growth

might not be sustained and the development of insurance market will remain scarce. Second, when developing the insurance market, the government should reduce the real interest rate, for example. Furthermore, policy-makers also need to anticipate the country's demographic structure and income level. However, further research of the issue of how insurance market development promotes economic growth should be on the focus of researchers.

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