

Macroeconomic Determinants of Insurance Sector Development in Sri Lanka

W.A.D.D.W. Arachchi and N.P.R. Deshapriya
Uva Wellassa University, Badulla, Sri Lanka

Introduction

Financial institutions play a prominent role in supporting economic development in Sri Lanka. In recent decades, insurance sector as a segment of financial institutions has contributed to the development of the economic activities of the country immensely. Macroeconomic environment is most influential on insurance sector development in Sri Lanka. Macroeconomic factors can be categorized as unemployment rate, inflation rate, percapita income, interest rate, and level of the stock market, exchange rate, growth rate of foreign direct investment, money supply and terms of trade.

This research attempted to examine the influence of macroeconomic determinants on insurance sector development. Domestic Investment, Inflation, Capital expenditure, Foreign Direct Investment (FDI), Growth Rate of Gross Domestic Production and Unemployment Rate were used as predictors of macroeconomic determinants and insurance sector development was measured by insurance premium. The study was designed to achieve the main objective of identifying relationship between macroeconomic determinants on insurance sector development in Sri Lanka. To observe the causality between macroeconomic determinants and insurance sector development was at the center of this study.

Methodology

All data in this study context were secondary in nature. The data related to the development of the insurance sector were obtained from the annual reports of Insurance Board of Sri Lanka (IBSL) and macroeconomic data were obtained from Central Bank annual reports.

Multiple regression analysis was used to achieve the first established objective and Granger Causality Test was used to identify the direction of causality between macroeconomic determinants and insurance sector development.

Results and discussion

Regression equation in order to accomplish the primary objective can be presented as follows.

$$\text{Insurance Premium} = -0.013973 + 0.436845^{***}\text{FDI} + 0.391509^{**}\text{INF} + 0.021936^{*}\text{GRRGDP} + 2.037729^{***}\text{DINVEST} + 3.113868^{***}\text{UNEMP} - 4.830767^{*}\text{K}$$

(Where, *** = 1% significant level, ** = 5% significant level and * = 10% significant level)

In accordance with the above regression equation, Intercept term of the regression equation is used to measure the value of depended variable when other independent variables are equal to zero.

Therefore, -0.013973 indicates that, the value of insurance sector development which measured by the premium is -0.013973 when all other macroeconomic determinants are equal to zero. And constant coefficient was used to identify the average change in insurance premium when other independent variables are changing.

Table 1: Macroeconomic determinants on insurance sector development in Sri Lanka

	Value
Number of Observations	12
R-squared	0.996015
Prob. >F	0.000124

The probability of F measures the significance of the model or regression equation. Therefore, Prob> F indicate the 0.000124 value which means that model is overly significant at 1%. As per the analysis, R- squared is 0.996015. It implies 99.6% of total variation in insurance premium is jointly explained by macroeconomic determinants.

Table 2: Granger Causality Test

Null Hypothesis	Obs.	F-Statistic	Prob.
LOG(TPREM) does not Granger Cause LOG(FDI)	10	0.00763	0.9924
LOG(FDI) does not Granger Cause LOG(TPREM)		5.04401	0.0632
LOG(TPREM) does not Granger Cause LOG(INFLATION)	10	0.16440	0.8528
LOG(INFLATION) does not Granger Cause LOG(TPREM)		5.78486	0.0500
GRRGDP does not Granger Cause LOG(TPREM)	10	0.66029	0.5566
LOG(TPREM) does not Granger Cause GRRGDP		2.11534	0.2159
LOG(DINVEST) does not Granger Cause LOG(TPREM)	10	6.29187	0.0430
LOG(TPREM) does not Granger Cause LOG(DINVEST)		5.05234	0.0485
LOG(UNEMP) does not Granger Cause LOG(TPREM)	10	0.14802	0.8661
LOG(TPREM) does not Granger Cause LOG(UNEMP)		2.94698	0.1427
LOG(K) does not Granger Cause LOG(TPREM)	10	5.86644	0.0488
LOG(TPREM) does not Granger Cause LOG(K)		0.00579	0.9942

According to the findings, three variables were identified as variable which affect to the insurance premium as Inflation, Foreign Direct Investment (FDI) and Capital expenditure. In contrast, there was bidirectional causality between Domestic Investment and Insurance Premium. Furthermore, Growth Rate of Gross Domestic Product (GDP) and Domestic Investment have shown insignificant results.

Conclusion

The study observed a positive relationship with Inflation, Foreign Direct Investment (FDI), Domestic Investment, Unemployment Rate and Growth Rate of Gross Domestic Product (GDP) While capital expenditure proving a negative relationship with the growth of insurance sector. Moreover, time is also factor which has affected to the insurance sector development rather than above mentioned variables as insurance premium has been increased with the increment of time. Further, three variables namely Inflation, Foreign

Direct Investment (FDI) and Capital expenditure were decisive in the context of industry growth. The study concluded that macroeconomic determinants play a decisive role in driving the insurance industry towards the path of growth and development.

References

Annual Report, Central Bank of Sri Lanka, Colombo 1997 – 2008.

Annual Report, Insurance Board of Sri Lanka, Colombo 1997 – 2008.

Chee Chee Lim, Steven Haberman, 2002. "Macroeconomic Variables and the Demand for Life Insurance in Malaysia".

Erik Feyen, Rodney Lester and Roberto Rocha, 2011. What Drives the Development of the Insurance Sector, Policy Research Working Paper, February.

Department of Census and Statistics Colombo, 2004. "Sri Lanka Labor Force Survey, Fourth Quarter 2003. Google, 04.May, 2004.