

Influence of Macroeconomics Factors and Legal Stability to the Insurance Growth in the ASEAN-5 Countries

(Pengaruh Faktor Makroekonomi dan Kestabilan Perundangan kepada Pertumbuhan Insurans di Negara ASEAN-5)

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ABSTRACT

This paper examines the influence of legal stability and macroeconomics factor to the non-life insurance development. In light of the growing significance of foreign direct investment (FDI) and trade that stimulate insurance sector, and the stress placed on legal stability of the countries, investigating the role of legal stability is crucial to sustain a country's financial development. This study employs a panel data analysis spanning 20 years in the selected developing countries. The findings suggest that higher trade, higher income, higher stock market trading activities and higher availability of finance credit will enhance the non-life insurance development. Legal stability such as enhancement on the property right and government integrity will improve the non-life insurance development. When the legal environments in emerging countries are more stable, the FDI and stocks market will become more encouraging and stimulate non-life insurance development. The policy makers should improve the legal stability in emerging countries to improve the financial development for minimizing the gap with developed countries. This study includes the institutional factors components in addition to the macroeconomics factors could provide a complete picture towards the improvement of non-life insurance development in emerging and transition countries.

Keywords: Institutional quality; property right; government integrity; insurance growth

ABSTRAK

Kertas ini mengkaji pengaruh kestabilan undang-undang dan faktor makroekonomi ke atas perkembangan insurans bukan hayat. Memandangkan peningkatan pelaburan langsung asing (FDI) dan perdagangan yang merangsang sektor insurans, dan tekanan yang diberikan kepada kestabilan undang-undang negara, maka kajian ke atas peranan kestabilan undang-undang adalah penting untuk mengekalkan pembangunan kewangan negara. Kajian ini menggunakan analisis data panel yang merangkumi tempoh 20 tahun di negara-negara membangun yang terpilih. Penemuan kajian menunjukkan bahawa semakin tinggi tingkat perdagangan, pendapatan, aktiviti perdagangan pasaran saham dan ketersediaan kredit kewangan akan meningkatkan pembangunan insurans bukan hayat. Kestabilan undang-undang seperti peningkatan hak harta dan integriti kerajaan akan meningkatkan pembangunan insurans bukan hayat. Apabila persekitaran undang-undang di negara-negara membangun lebih stabil, FDI dan pasaran saham akan menjadi lebih menggalakkan dan merangsang pembangunan insurans bukan hayat. Pembuat dasar perlu meningkatkan kestabilan undang-undang di negara-negara membangun untuk meningkatkan pembangunan kewangan bagi meminimumkan jurang dengan negara-negara maju. Selain itu, kajian ini juga mengambilkira komponen faktor institusi sebagai tambahan kepada faktor makroekonomi bagi memberikan gambaran yang lebih lengkap mengenai peningkatan pembangunan insurans bukan hayat di negara-negara yang sedang berkembang dan mengalami peralihan.

Kata kunci: Kualiti institusi; hak harta; integriti kerajaan; pertumbuhan insurans



INTRODUCTION

The rising interest and concern have been focused on the financial economic and legal stability due to the globalisation and trade policy lobbying issues. The globalised economy can stimulate financial service sector and provide a well financial platform in the world. Past researchers such as Fang et al. (2014), Petkovski et al. (2014), Olgić Draženović and Kusanović (2016) and Dragos et al. (2017) recommend that effective legal systems and strong protections enhance financial market expansion through better enforcement mechanisms. An immense deal of attention has been focused to the development of banking industry but a scant attention has been paid to insurance, which is classified as the third keystone of the financial services sector (Pan et al. 2016; Kjosevski & Petkovski 2015).

The non-life insurance sector plays important roles in the financial and economic development over the last few decades as financial services provider to consumers. The functions of insurance is to allocate efficient financial resources, produce liquidity, diversify financial losses and facilitate investment in an economy (Fah & Sin 2014; Lee et al. 2017; Outreville 1996). Generally, studies by Lee et al. (2013) and Beck et al. (2003) have documented that economic, demographic and institutional factors will influence the development of non-life insurance. Institutional factors such as legal stability is vital for a growing and vibrant non-insurance market (Dragos et al. 2017). Beck et al. (2003) argue that the growth of insurance may depend on the soundness of institutional environments. As such, the eminence of the legal system and the protection of property rights demonstrate a significant impact on developments in insurance sector. However, deregulation and liberalisation have facilitated globalisation of risks and insurance services (Cummins & Venard 2008; Park & Lemaire 2012). This begs the question as to the fussy effects of legal stability on insurance development which is somewhat mixed and requires further investigation.

What are the impacts of the property rights to the insurance sector? From the perspective of insurance, the enforcement of property rights build an economic motivation to obtain and insure property, since government and legal enforcement of property rights help to defend individuals from loss or damage to the asset. There would be higher potential return from insurance if more property rights are maintained well because it is an efficient means of transferring risk (Esho et al. 2004). Another problem is the corruption issue that introduces insecurity and uncertainty that may erode the true purpose of the insurance policies in protecting the policyholders. The lack of government integrity caused by such practices reduces insurance vitality by increasing costs and shifting resources into unproductive lobbying activities. Hence, if the rules of law in a country are not stable, particularly in the

emerging countries, it might affect the development of the non-life insurance sector.

Insurance market in Asian region is one the most dynamic in the world and central to some of the most important global trends that would outshine those in the European Union and North America. This is due to the fact that the rising income in Asian over the past few years have created a centre of attention insurance firms to expand their existence in this region (Pininparakarn 2016). In building an Asian regional market for trade in financial services and insurance over the last two decades, the various phases of development and openness across the region have raised important questions of prudential stability, consumer protection and regulatory. Furthermore, with the launch of Belt and Road Initiative (B&R) by China, it is forecasted to trigger a new wave of trade liberalisation construction activities. The B&R will connect China with Southeast Asia, Africa and Europe. This will in turn present opportunities to insurers because according to (Swiss Re, 2016a), the insurance premium potential coming out of those projects is projected to be USD 7 billion. In 2016, trade volumes with Southeast Asian nations accounted for 46.8% of the total trade with B&R countries as a result from the formation of the ASEAN–China Free Trade Area (ACFTA) and the improvement in bilateral relations. With an affiliated rise in demand for trade credit and general cargo coverage, this situation provides an opportunity for insurers, particularly the insurers in ASEAN countries. It also presents great opportunities to the foreign insurers to determine their best approach to build a long-term presence perhaps in the new ASEAN markets, such as by going into partnership with a host-location entity. Moreover, there is still a lack of study on the non-life insurance development in ASEAN countries in the literature. Hence, this study is an attempt to investigate the factors that influence the non-life insurance in 5 ASEAN countries.

The objectives of this paper are twofold. First, it will explore the economic factors that influence the development of non-life insurance in the selected developing ASEAN countries. Thus, it is important to study the development of non-life insurance in the emerging ASEAN market. Insurance penetration in the ASEAN countries continues to display enormous variations that can only partially be accredited to economic conditions. Borscheid and Haueter (2015) argue that legal environment will contribute to the change. Moreover, there is rising concern among business participated in B&R projects about the intensity of regulation at both regional and international levels. Thus, in the second objective, it will investigate the roles of institutional from the legal stability perspective in influencing the determinants of the non-life insurance development and its impacts on the growth of non-life insurance.

There are two major contributions from this study. First, this study employ several macroeconomics factors that represent variations in economics that could affect

insurance growth namely gross domestic product per capita (GDPC), FDI, trade, stock traded, credit finance and inflation. These variables have covered the aggregate economy level (GDPC), level of investment and trading with other countries (FDI and trade), finance capitalisation level (stock traded and credit finance) and market stability (inflation). Second, legal stability from the aspects of property right and government integrity play important roles in stimulating insurance growth. This is because the soundness of the legal rules and jurisdictions will ensure the insurance premiums are invested into proper instruments with the aim of obtaining an adequate return that can meet the expectations of insurance customers.

This research is distinct from existing literature as it investigates the relationship between non-life insurance market and its determinants with country groups rather than for individual countries. This is because the differences in institutional developments across countries are likely to be correlated with other country characteristics that may influence both institutional development and insurance stability simultaneously. Emerging ASEAN countries are chosen because they will likely have the strongest growth in non-life premiums, expected to be nearly 8% in 2017 and 9% in 2018. A contributing factor will be the investment opportunities presented by China's Belt and Road Initiative, which is expected to generate an increase in demand for commercial insurance (Swiss Re 2016b). Regulations appear to have vital impacts on insurance development, which could be of interest to policy makers in the insurance industry. Therefore, this paper paints a more complete picture on the factors that influence the non-life insurance development.

The rest of the paper is arranged as follows. In Section 2, relevant literature will be reviewed. Section 3 illustrates the data selection and methodology. Section 4 explains the analysis of the empirical results, and Section 5 concludes the research and discusses policy implications.

LITERATURE REVIEW

Generally, insurance is divided into life and non-life. Non-life or also known as general insurance focused on obligatory types of insurance such as motor and fire insurance; non-compulsory coverage such as theft, marine, aviation, travel and bond insurance. On the other hand, life insurance protect the beneficiaries upon a certain accidents such as medical insurance (Kjosevski & Petkovski 2015; Millo & Carmeci 2011). According to Borscheid and Haueter (2015), modern insurance is a European discovery and a response to the speedy growth in risk that resulted from the development of trade and the expansions of industrialization. As insurance begins to spread into other cultural realms, it came into antagonism with various institutionally different and

home-grown forms of risk management. In the early of twentieth century, insurance is able to gain a decisive foothold to become the most essential trade canter, with the assistance of multinational companies, transfer of people and international agreements. As a consequence of globalisation and its affiliated parties shift in values, Southeast Asian is among the regions in which insurance is slow to gain acceptance. Lee et al. (2016), Trinh et al. (2016), Lee et al. (2015), Dragos (2014), Petkovski et al. (2014) and Njegomir et al. (2012) have examined the insurance development in the random cross countries sample, comparison between developed and developing countries and investigation in the European region. Due to the fact that the developing countries in Southeast Asian are among the slow countries to develop insurance service, their contributing influences on insurance and impacts on economics will be different from other regions. In this vein, this article attempt to fill the gap by examining the impacts of economic determinants and legal stability factors on the development of non-life insurance in ASEAN.

The fundamental economic factors that influence the insurance development is income (Chang & Lee 2012; Liu et al. 2016; Millo 2016;). Empirical researches have mainly employed aggregate market and economy level data in examining the effect of income on non-life insurance consumption, due to the difficulty in accessing micro-based income statistics. Studies by Sen et al. (2013), Han et al. (2010) and Beck et al. (2003) postulate that the income is positively related to the insurance development. The higher the level of income, will lead to higher demand in non-life insurance, in order to protect the acquired property. Nevertheless, Lee and Chiu (2012) provide supports that there is a nonlinear relationship between real income and insurance consumption across a wide range of countries. The income elasticity of insurance premiums changes over time and across nations, relying on thresholds that characterised as different "regimes", with dissimilar speeds of change in each regime. As such, the sample of this study falls under the regime of developing countries in ASEAN, the contribution is to provide insight on whether insurance is a normal or inferior product for emerging countries.

Kucera et al. (2014) identify that foreign direct investment (FDI) exerts a larger effect in service industry such as finance and insurance than manufacturing industry. Li, Moshirian and Sim (2003) suggest that increase in foreign trading partners will enhance the product differentiation in insurance services. The increase competition will compel the insurance providers to provide better service, leads to improvement in consumer welfare and indirectly improve the healthy growth of insurance. Nevertheless, Powers et al. (2012) suggest that FDI harms the growth of insurance development since damages in multinationals' buildings and products will cause a climb in insurance premiums but compensated at a higher claims. Wilkins (2009) demonstrates that insurance

sector gains substantial opportunities and revenues from the operations in foreign locales (Multinational Enterprises, MNEs). Interestingly, it is highlighted that the host country regulations and other government actions could influence the developments of insurance and thus this area of study should not be neglected.

Insurance provide protection in trading activities against the risks involved in international and domestic trade, for example price or currency fluctuations, and non-payments. More trading in goods and services imply that the country is more open, hence it will accumulate more insurance assets. ASEAN has become progressively more important trading partner for all other developing country regions. Exporting and importing activities generate additional variable trade costs due freight insurance (Contessi et al. 2012). Furthermore, government in emerging countries may initiate trade finance instrument such as insurance credit subsidies to promote export. Lee et al. (2016) and Roe et al. (2011) indicate that trade openness and the related and resultant institutions cannot function well under unstable political environments. Thus, the well-functioning of other institutional dimensions, such as the legal rules depend on the soundness of political aspects. Political environments are hence linked directly with insurance activities.

Stock market capitalisation and bank credit will foster economic growth and improve the needs on insurance product. Larger values of these indicators indicate a more market-based financial system (Hou & Cheng 2017; Law & Singh 2014). Furthermore, Beck et al. (2003) propose that higher bank credit indicates that households are more in debt. They have a higher probability of occurring risky events which affects their expected future wealth. Lee and Lin (2016) suggest in that banks have a large incentive to transfer part or all of their risk to the capital markets due to the strong correlation among bank assets that may raise the probability of their insolvency. Thus, insurance is required to mitigate these unexpected risks. As a consequence, the financial nexus within and between the banking and insurance sectors account for financial stability.

From a legal perspective, insurance is a contractual relation between the insurer and the insured (Chang et al. 2012; Lee et al. 2015). Fang et al. (2014) and Beck et al. (2003) explain that the protection of contractual rights depends on the soundness of the legal rules and jurisdictions. As such, the legal environment is associated with insurance activities. Another legal aspect that may affect insurance is related to the protection of property rights. Insurers need to invest their funds collected from premiums into proper instruments in order to obtain an adequate return that can meet their obligations to the insured in the future. Wen and Zhang (1993) show that an individual's long-term investment behaviour is distorted when their property rights cannot be assured. The protection of property rights thus has a linkage with insurers' investment behaviours.

The development of a healthy non-life insurance market will be discouraged by political instability. This is due to political instability will influence the economic horizon of potential suppliers and buyers of insurance products. Ward and Zurbruegg (2002) describe that political stability postulates a significant impact on insurance demand both in developed and developing economies. They also find that an improvement in the legal system positively impacts the demand for life insurance in developing countries. However, OECD countries already have a sounder legal system, thus the legal effects are not influential in the OECD countries. Thistlethwaite (2017) and Beck et al. (2003) find that institutional, quality of the legal system and the protection of property rights has a positive effect on life insurance development. As institutional issues are typically associated to the level of economic development, with the expectation of institutional environments could exert an impact on shaping the insurance growth relationship from which policy implications can be implemented, we extend our paper by exploring both economic and legal institutional effects on the insurance development.

This study fills up the gap in existing literature on three main aspects. First, unlike most of the studies that examine the issues of non-life insurance development in developed Europe countries (see: Dragos 2014; Kjosevski & Petkovski 2015; Njegomir et al. 2012), this studies focus on non-life insurance development in ASEAN-5 developing countries. This is because there are still plenty of room for the non-life insurance industry in these countries to grow better. Second, the use of various macroeconomic factors from difference perspectives namely the aggregate economy level, level of investment and trading with other countries, finance capitalisation level and market stability in a model may explain a more complete picture on the features that effect the non-life insurance development. Third, this study further elucidates the impacts of legal stability from the viewpoints of property right and government integrity on the non-life insurance development in ASEAN-5.

DATA AND METHODOLOGY

This study will employ a data spanning a period from 1995 to 2014 in the selected developing countries in ASEAN. The countries are Indonesia, Philippines, Thailand, Malaysia and Vietnam (ASEAN-5). The data are from 1995 onwards because majority of the macroeconomics data prior to 1995 are not accessible, as the importance of transparency of data only highlighted after the Asian crisis around 1997. The period is covered until 2014 because most of the recent data are not updated yet. All the macroeconomics data are extracted from the World Bank except for the variables to measure legal stability are extracted from Heritage Foundation.

The macroeconomics variables in this study are non-life insurance penetration, gross domestic product per capita, trade, stock traded, credit finance and inflation. Heritage Foundation provides the indicator for the stability of rule of law by three components namely property rights, juridical effectiveness and government integrity. This study employs property rights and government integrity to measure legal stability because juridical effectiveness data is only introduced after year 2016. The property rights constituent examines the degree to which a country's legal framework allows individuals to freely accumulate private property, secured by clear laws that are enforced effectively by the government. It provides a quantifiable measure of the degree to which a country's laws protect private property rights and the extent to which those laws are respected. It also assesses the likelihood that private property will be expropriated by the state. The score for this component is derived by averaging scores for the five sub-factors, namely physical property rights, intellectual property rights, strength of investor protection, risk of expropriation and quality of land administration. The more effective the legal protection of property, the higher a country's score will be. Correspondingly, the greater the chances of government expropriation of property, the lower a country's score will be. Furthermore, government integrity is to measure the corruption level. Corruption erodes economic freedom by introducing insecurity and uncertainty into economic relations. Of greatest concern is the systemic corruption of government institutions and decision-making by such practices as bribery, extortion, nepotism, cronyism, patronage, embezzlement, and graft. The lack of government integrity caused by such practices reduces economic vitality by increasing costs and shifting resources into unproductive lobbying activities. The score for this component is derived by averaging scores for the six sub-factors namely public trust in politicians, irregular payments and bribes, transparency of government policymaking, absence of corruption, perceptions of corruption and governmental and civil service transparency. The higher the score, it indicates that little corruption; the lower the score, reflecting very corrupt government.

Following the models by Trinh et al. (2016), Petkovski et al. (2014), Njgomir et al. (2012) and Millo et al. (2011), the panel regression models in this research is examined through three models namely, pooled ordinary linear regression model (pooled OLS), random effect model (REM) and fixed effect model (FEM).

The pooled OLS model is expressed as:

$$\begin{aligned} NLP_{it} = & \beta_0 + \beta_1 \ln GDPC_{it} + \beta_2 \ln FDI_{it} \\ & + \beta_3 Trade_{it} + \beta_4 Stock_{it} + \beta_5 CreditFI_{it} \\ & + \beta_6 INF_{it} + \beta_7 PropRight_{it} \\ & + \beta_8 GovInt + \varepsilon_{it} \end{aligned} \quad (1)$$

The REM model is expressed as:

$$\begin{aligned} NLP_{it} = & \beta_0 + \beta_1 \ln GDPC_{it} + \beta_2 \ln FDI_{it} + \beta_3 Trade_{it} \\ & + \beta_4 Stock_{it} + \beta_5 CreditFI_{it} + \beta_6 INF_{it} \\ & + \beta_7 PropRight_{it} + \beta_8 GovInt + \lambda_i \\ & + u_{it}, \text{ where } Cov(\lambda_i, X_{it}) = 0 \end{aligned} \quad (2)$$

The FEM model is expressed as:

$$\begin{aligned} NLP_{it} = & (\lambda_i + \beta_0) + \beta_1 \ln GDPC_{it} + \beta_2 \ln FDI_{it} \\ & + \beta_3 Trade_{it} + \beta_4 Stock_{it} + \beta_5 CreditFI_{it} \\ & + \beta_6 INF_{it} + \beta_7 PropRight_{it} + \beta_8 GovInt \\ & + u_{it}, \text{ where } Cov(\lambda_i, X_{it}) \neq 0 \end{aligned} \quad (3)$$

Firstly, pooled OLS is exploited to present result based on poolability of the data but disregards the panel structure of the data. This means that the model disregard the panel nature of the data and treat ε_i as identically and independently distributed disturbances that are uncorrelated with independent variables. Thus, the data can be pooled and OLS can be utilised to evaluate the model. However, pooled OLS may cause heterogeneity bias, which explains that the countries are all different from one another in fundamental unmeasured ways that vary across countries. Hence, REM or FEM will be employed because ε_i is decomposed into two independent components error term as $\varepsilon_{it} = \lambda_i + u_{it}$. λ_i is time invariant that captures the country-specific effect. REM handles the constants for each section as random parameters by assuming λ_i as a random variable and it is drawn independently from some probability distribution. In FEM, the constant is treated as group specific which means the model allows for different constants for each country. The λ_i in FEM is assumed to be constant and it may be correlated with some of the regressors in the model. The selection between pooled OLS and REM is based on Breusch-Pagan Lagrangian Multiplier (BPLM) test where the null hypothesis refers to $\sigma_\lambda^2 = 0$ (Pooled OLS is preferred) versus the alternative hypothesis refers to $\sigma_\lambda^2 > 0$ (REM is preferred). The choice between REM and FEM is based on Hausman test where the null hypothesis refers to $Cov(\lambda_i, X_{it}) = 0$ (REM is preferred than FEM), versus the alternative hypothesis refers to $Cov(\lambda_i, X_{it}) \neq 0$ (FEM is preferred than REM) (Gujarati & Porter, 2009). The explanations of the variables are presented in Table 1.

RESULTS AND DISCUSSION

Generally, insurance is divided into life and non-life. Non-life or also known as general insurance focused on obligatory types of insurance such as motor and fire insurance. Table 2 illustrates the descriptive statistic of the data. The non-life insurance in the selected emerging ASEAN countries are considered as low with the average of 0.86% premium expense for each GDP with the maximum at 2.01% and minimum at 0.29%. The property right are also considered low with the average score of 41.75 and

TABLE 1. Descriptions of the Variables

Variable	Measurement /Explanation	Expected Sign on NLP
NLP (Dependent variable)	=Non-Life Premiums / Gross Domestic Product (Non-life insurance density) Premium volume is the insurer's direct premiums earned, it is the proxy of the insurance development as a result of insurance expenditure by customers.	N/A
lnGDPC	=GDP per capita is gross domestic product divided by midyear population	(+) Higher income will enhance the consumption on insurance.
lnFDI	=Direct investment equity flows in the reporting economy. It is the sum of equity capital, reinvestment of earnings, and other capital	(+) Increase in foreign trading partners will enhance the product differentiation in insurance services that increase the growth of insurance.
Trade (% of GDP)	=Trade is the sum of exports and imports of goods and services measured as a share of gross domestic product	(+) The trading activities will require insurance service to provide risk mitigation.
Stock	=Total value of all traded shares in a stock market exchange as a percentage of GDP	(+) The stock traded is commonly treated as financial development, the higher the financial development, it tends to increase the performance of insurance development.
CreditFI	=Domestic credit provided by financial sector (% of GDP)	(+) The availability of the credit will provide higher budget and provide opportunity to purchase insurance product.
INF	=Inflation rate, the annual growth rate of the GDP implicit deflator shows the rate of price change in the economy as a whole	(-) The inflation rate affects insurance development because insurance products provide monetary benefits over the long term, but inflation decreases the cash value received in the future.
PropRight	=The extent to which a country's legal framework allows individuals to freely accumulate private property, secured by clear laws that are enforced effectively by the government	(+) There would be higher potential return from insurance if more property rights are maintained well because it is an efficient means of transferring risk.
GovInt	= Corruption level (0: high corruption; 100: low corruption)	(+) Higher integrity increases insurance vitality by reducing costs when unproductive lobbying activities are minimised, thereby increasing insurance growth.

TABLE 2. Descriptive Data

	Obs	Mean	Std. Dev	Min	Max
NLP (% GDP)	98	0.86	0.46	0.290	2.01
lnGDP	100	8.79	0.68	7.31	10.16
lnFDI	100	20.93	4.92	0	23.99
Trade (% GDP)	100	115.15	47.53	45.51	220.41
Stock (% GDP)	86	26.35	20.55	2.63	83.33
CreditFI (%GDP)	100	88.08	44.83	20.07	178.42
INF	99	5.70	6.66	-1.71	58.39
PropRight	100	41.75	21.34	10	90
GovInt	100	31.84	13.43	10	70

range from 10 to 90. Similarly, government integration score is also considered as low due to its average value of 31.849 and in between the minimum value of 10 and maximum value of 70. This proposes that the legal stability in the emerging countries in ASEAN is weak.

The correlation coefficient matrix is illustrated in Table 3. Since the correlation values among the independent variables are less than 0.8 and Gujarati

et al. (2009) asserted that coefficient correlation that is less than 0.8 may not be subjected to serious multicollinearity problem. Moreover, we verify for multicollinearity problem by using variance inflation factors (VIF). As a rule of thumb, Gujarati and Porter (2009) recommend a critical threshold of a maximum of 10. Refer to Table 4, the VIF for this model is 2.75, thus it does not exert serious multicollinearity problem.

TABLE 3. Correlation Matrix among the Variables

	NLP	lnGDP	lnFDI	Trade	Stock	CreditFI	INF	PropRight	GovInt
NLP	1								
lnGDP	0.749	1							
lnFDI	0.200	0.291	1						
Trade	0.825	0.582	0.231	1					
Stock	0.727	0.706	0.260	0.587	1				
CreditFI	0.854	0.631	0.247	0.744	0.663	1			
INF	-0.313	-0.380	-0.497	-0.213	-0.327	-0.287	1		
PropRight	0.551	0.186	0.047	0.292	0.344	0.536	-0.208	1	
GovInt	0.809	0.627	0.221	0.728	0.510	0.673	-0.274	0.546	1

TABLE 4. VIF Result

	VIF	1/VIF
lnGDP	1.39	0.718775
lnFDI	1.49	0.669351
Trade	2.33	0.428683
Stock	2.58	0.388091
CreditFI	3.14	0.3188
INF	3.57	0.279972
PropRight	3.75	0.266905
GovInt	3.76	0.266048
mean VIF	2.75	

The result in Table 5 represents the outcome based on panel data model as discussed in section 3. The most suitable model is pooled OLS because the null hypothesis in BPLM test is not rejected. From model 1, the variables included are only 6 macroeconomics factors which exclude the impacts of legal stability. Among the six variables, five variables namely GDPC, FDI, Trade, Stock and CreditFI demonstrate significant results. Inflation does not show significant impact on the non-life insurance development. Income of the country which is proxied by GDPC suggests positive relationship with insurance development at 1% significant level. This proposes that when consumers are wealthier, they will spend more on insurance, as they have more assets to protect. Moreover, it also indicates that insurance is a normal good to the consumer in ASEAN, support the findings by Lee and Chiu (2012) where insurance is a normal good instead of inferior good in the developing countries. However, FDI illustrates a negative relationship at 5% significant level with insurance development. The result does not support the recommendation by Li et al. (2003) that increase in foreign trading partners will enhance the product differentiation in insurance services. This might be due to the insurance players in developing countries in ASEAN is yet to take the opportunity from foreign trading partners speedily when opportunity arises. The negative result could be due to the damages in multinationals' buildings

and products and harm the insurance development, support the findings by Powers et al. (2012). The third variable, trade shows positive relationship with non-life insurance development at 1% significant level. It suggests that the developing countries in ASEAN are relying on trade activity that heavily depends on marine and cargo industries, hence the consumption on non-life insurance to safeguard these assets is also high (Kjosevski & Petkovski 2015). Moreover, this might propose that the current hot topic on investment opportunities presented by China's One Belt One Road program which are very much related to the trade activities, could stimulate more on non-life insurance development in the future. Stock and credit finance are also contributing to the development in non-life insurance. This is because, the more stock trading activities and availability of credit finance, will enhance the finance development in these countries. Banks and other finance institutions will have larger risk in the capital markets, hence insurance is required to diversify these unexpected risks. The findings are consistent with Pan et al. (2016) which recommend that the financial nexus within and between the banking and insurance sectors account for financial stability. Nevertheless, inflation does not show significant negative relationship with non-life insurance development. According to literature, for non-life insurers, unanticipated inflation leads to higher claims costs, hence minimising profitability. To the consumers, rising inflation can have a negative cause on demand on insurance and may lead to policyholders cancelling their policies as well as increasing costs for insurers. The result from this finding is contradict with the past studies, propose that inflation is less important compared to other macroeconomics factors that influence the non-life insurance development.

Legal and political circumstances have an overwhelming positive effect on insurance development in non-developed countries (Chang & Lee 2012; Dragos et al. 2017). Thus, models 2, 3, 4 are the models to include the legal stability factors to study their impacts on the non-life insurance development in the ASEAN emerging countries. At the same time, they are also being employed to examine their impacts on other

TABLE 5. Results of models

Models	(1)	(2)	(3)	(4)
lnGDPC	0.189*** (0.051)	0.212*** (0.049)	0.253*** (0.044)	0.127** (0.048)
lnFDI	-0.008** (0.004)	-0.006* (0.003)	-0.005 (0.003)	-0.008** (0.003)
Trade	0.003*** (0.001)	0.003*** (0.001)	0.003*** (0.001)	0.002*** (0.001)
Stock	0.003* (0.001)	0.002* (0.001)	0.001 (0.001)	0.003** (0.001)
CreditFI	0.004*** (0.001)	0.002*** (0.001)	0.002*** (0.001)	0.003*** (0.001)
INF	-0.003 (0.003)	-0.001 (0.002)	-0.001 (0.002)	-0.002 (0.002)
PropRight		0.005*** (0.001)	0.006*** (0.001)	
GovInt		0.004* (0.002)		0.008*** (0.002)
Constant	-1.394*** (0.432)	-1.831*** (0.430)	-2.179*** (0.389)	-0.989** (0.400)
Observations	84	84	84	84
BPLM test	1.94	1.97	1.95	1.95
R-squared	0.869	0.912	0.908	0.895
Adjusted R2	0.859	0.902	0.900	0.885
F-statistics	84.98***	96.90***	107.20***	92.30***

Note: The best model is pooled OLS compared to REM and FEM after various tests (in BPLM test, the null hypothesis is not rejected) have been performed as discussed in Data and Methodology section. The model is also representative to the characteristics of these five countries in ASEAN because they are developing countries in ASEAN and constitute more than half of ASEAN's population. Figures in parentheses are standard errors. *, **, *** indicate statistical significance at 10%, 5% and 1% respectively

macroeconomics changes towards the non-life insurance development. Model 2 includes both of the property right and government integrity variables. Model 3 is only with property right variable and Model 4 is only with government integrity variable.

In Model 2, property right proposes positive significant relationship with non-life insurance at 1% significance level, government integrity shows 10% significance level. This result is consistent with the findings by Dragos et al. (2017) who postulate significant influence of regulatory quality towards the life insurance growth in both developing and developed countries. Interestingly, FDI has become less significant compared to Model 1 with the roles of legal stability. This result suggests that when the institutional environment in emerging countries in ASEAN are more stable, their intention to enter these countries will increase. When foreign insurers enter emerging ASEAN market, their entry and generated more competitive local insurance markets. Additionally, local economies tend to catch the attention of foreign companies in order to generate foreign investments inflows, improve competitiveness

of local insurance markets and achieve the greater availability and more affordable insurance coverage (Njegomir & Stojić 2012).

In Model 3, when property right factor is introduced in the model, the other macroeconomics variables results remain the same as in model 1 but FDI has completely become insignificant. The discovery explains that when multinational companies' property rights are assured, they believe that purchase of non-life insurance coverage could protect their assets in the subsidiary companies in ASEAN. Thus, the negative relationship between FDI in non-life insurance has become insignificant. This is consistent with the explanation that insurers need to invest their funds collected from premiums into proper instruments in order to obtain an adequate return that can meet their obligations to the insured in the future (Lee et al. 2016).

Government integrity could stimulate stock trading activities and enhance non-life insurance development, which could be observed from Model 4. When government integrity is stronger, the stock activities will have lesser corruption activity and leads to a stronger

institution environment. This will improve the finance development in emerging ASEAN countries as the financial regulations become solid and stringent. Therefore, it will assist to develop non-life insurance market with healthier progress and make the insurance industry become stronger.

CONCLUSIONS

Insurance engages the legal transfer risk through a valid contract, thus the importance of the contract is dependent upon legal rules and enforcement, as well as the stability and integrity of the law making process. Therefore, the development of insurance market as one of the financial intermediation, is crucially relying on the quality of the legal system other than the economic environment in a country. Insurance premium growth in the ASEAN will be fuelled by the rising Chinese investments in the B&R, hence, a stronger regulatory environment and improving economic policy frameworks are needed.

Some new developments and more recent researches have emerged on the discussion of institutions. Thus, the objective of this research is to examine both macroeconomic factors and legal stability factors that influence the development of non-life insurance in the selected developing countries. This research is distinct from existing literature as it investigates the relationship between non-life insurance market and its determinants with country groups rather than for individual countries in the emerging countries. Hence, this research draws a more complete picture on the aspects that influence the non-life insurance development.

The findings suggest that higher income, higher trading activities, higher stock market trading activities and higher availability of finance credit will enhance the non-life insurance development. However, there is negative relationship between foreign direct investment and insurance development. Furthermore, inflation does not show significant impact toward the non-life insurance development in emerging countries. Legal stability such as enhancement on the property right and government integrity will improve the non-life insurance development too. Interestingly, when the legal environment in emerging countries are more stable, the foreign direct investment and stocks market will become more encouraging and stimulate non-life insurance development.

This study complements earlier studies in several aspects. First, we employ the emerging ASEAN countries as the sample due to many literatures are concentrating on the insurance market in the developed regions such as European and American countries. It provides important ideas for the policy makers on what are the crucial factors that influence the development non-life insurance on developing countries. Second, institutional environment issues are more relevant for non-developed countries as enhancing the institutional environments could be path

for these economies to attract foreign insurers to enter domestic insurance markets, particularly ASEAN market as it is one the most dynamic in the world and central to the current global trends.

The results are also important to the policy makers because strengthening legal stability will enhance the insurance sector in the globalisation trends. Legal stability is important to shape non-life insurance development in the emerging countries. Policy makers should strengthen the level of legal stability in order to ensure an adequate quality of finance rather instead of intensifying the financial sector without considering the institutional quality. With better legal stability, insurance market in developing countries could grow to a better direction and conforming to international standards. This is to ensure that the insurance market in developing countries can support globalisation in attracting multinational insurance companies to merge with the local insurers, enabling them gradually integrate with globalisation trend and 'catch up with' the developed countries.

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