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Exogenous Motivators of the Entrepreneurial Development of the ASEAN Outward FDIS: an Aggregate Observation

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Abstract: The study sought to aggregately evaluate the exogenous economic factors of the entrepreneurial development of the original five Asean foreign direct investments or FDIs as reinforcement and motivators for expanding business. The five original Asean countries are Indonesia, Malaysia, Singapore, Thailand, and the Philippines. The study used a multi-variate regression to aggregately predict the Asean FDIs (y) motivators using a 20 semi-annual unbalanced panel data based on their potential exogenous economic factors; i.e. Asean investors' consumption as % GDP (x1), GDP growths (x2), Asean investors' international reserves as a % of GDP (x3), and Asean investors' exports as % GDP (x4). A multi variation regression coupled with a qualitative research was used to identify the entrepreneurial motivators from the exogenous economic factors, and non-parametric statistics to observe the differences of the Asean FDIs. The observation concluded that the four exogenous economic variables; the GDP consumption and growth, international reserves and exports, didn't all function as motivators to the entrepreneurial development of the five original Asean countries' outward FDIs, except for Indonesia, Thailand and the Philippines. In addition it was revealed that there was no significant difference in the FDIs growth rate among these Asean countries. It was therefore recommended that the exogenous motivators be the bases for entrepreneurial development toward more Asean outward FDIs, particularly for the objective of expanding Asean countries' export business, .strategic subsidiaries, and .more Asean business licensing and franchising through the Asean outward FDIs.

Keywords: FDI, GDP, national consumption, entrepreneurship.

1. Background of the Study

The Association of South East Asian Nations or abbreviated as Asean, originally organized by virtue of the Bangkok Declaration in Bangkok, Thailand, on August 8, 1967, sought to develop the three-pillar sectors of the member countries' politics, economics and cultural progresses together. The region covers a geographical area of around 4.5 million km sq., representing around 3% of the world's areas, with a total population of around 600 million people, representing a 9% of world population.

There were several studies conducted on entrepreneurial development in general as well as those taken place in the Asean countries; i.e. the positive trend of the Asean countries' outward FDIs at a yearly growth rate of 35.5% and 3.4% during the period of two years 2012 and 2013, respectively, in spite of their declining tendency in 2013. Asean outward FDIs, mostly in the manufacturing of electronics, automotive and its parts, were mostly made to Cambodia, the Lao People's Democracy Republic, Myanmar and Vietnam due to the wage cost differentials and market opportunities. Other countries' FDIs in Asean were dominated by the Japanese investors. Refer to Table 1.

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Table1: Cumulative FDIs of the Five Original Asean Countries (In B-USD)

ASEAN COUNTRY	2004-08	2009-13	Growth (%)	χ^2	p
Indonesia	67.3	207.2	25.2		
Malaysia	62.8	133.5	16.3		
Singapore	173.9	367.8	16.2		
Thailand	7.1	65.1	55.7		
Philippines	5.8	9.4	12.8		
Differences at df = 4 and sig 0.05				-39.2	1.96

Source: Retrieved from www.indexmundi.com/g/g.aspx?v=65&c=id&l=en on Sept 2015

In general the most active Asean outward FDIs were those made by Thailand as yearly growth indicated a 55.7% rate, followed by Indonesia at a yearly growth rate of 25.2% during the past ten years (2004-2013). However, in terms of amount Singapore seemed to invest more at USD 367.8 B until the year 2013.

Some have observed the relationship between their potential motivators with development in the fields, even though this study concentrated on the dependency between the growth of outward FDIs of the five original Asean countries and the exogenous motivators; i.e. consumption as % GDP (x1), GDP growth % (x2), international reserves as % GDP (x3), and exports as % GDP (x4). The study was basically inspired by the need of the Asean countries to excel in the midst of single market era after the year 2015.

1.1. Research Questions and Hypotheses

The main problem of the study focused on the dependency of the exogenous economic factors with the growth of the original Asean countries' outward FDIs. The main objective was to observe the behavior of the four exogenous factors on outward FDIs.

Based on the main problem, the study specifically sought to answer the following research questions and test the related H0:

1. How did the exogenous economic motivators that are related to the entrepreneurial potential development, contribute to the prospective rank of the outward FDIs in the original Asean countries?

2. Were the following:
   - Consumption as % GDP (x1),
   - GDP growth % (x2),
   - International reserves as % GDP (x3), and
   - Exports as % GDP (x4),

   exogenous economic motivators in the development of outward FDIs of the original Asean countries? Why?

   H0: The consumption as % GDP, GDP growth %, international reserves as % GDP and exports as % GDP, weren't all exogenous economic motivators in the development of outward FDIs of the original Asean countries.

3. Did the original Asean countries' FDI yearly growths within the period 2004-2013 significantly differ in general?

   H0: The original Asean countries' FDI yearly growths within the period 2004-2013 didn't significantly differ in general.

1.2. Scope, Delimitation and Limitations of the Study

The scope of the study was presented as an evaluation of the five original Asean counties, which were Indonesia, Malaysia, Singapore, Thailand and the Philippines.

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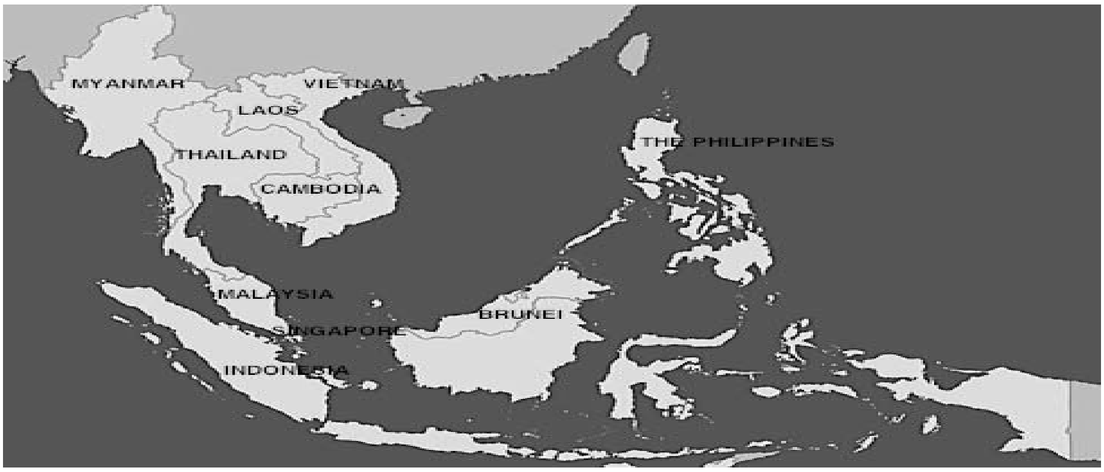

Figure 1. Asean M a p (Location indicator of the 5 original Asean nations) (Source: *Image retrieved from www.asean.org/archive/5187-10.pdf on 8/4/2014*)

In addition to the scope of the study, the delimitation and limitation were presented as well. The study was delimited only to the five original Asean countries that were established by virtue of the Bangkok Declaration in Bangkok, Thailand, on August 8, 1967; or Indonesia, Malaysia, Singapore, Thailand and the Philippines. It was limited to the fact that other exogenous factors as determinants of the FDIs were not studied, except the GDP, international reserves and the export capability of the Asean FDI investors; as well as the end product of the researcher's analysis would be mainly used to answer the questions of the study.

1.3. Objective, Purpose and Significance of the Study

The objective of the study sought to observe the relationship of the Asean FDIs growths to the main exogenous variables postulated by Kyrkilis & Pantelidis for GDP, Yusuf, A. & Schindehutte for the availability of the Asean investors' international reserve currencies, and the Institute of Developing Economies-JETRO for the need to expand their export market through the outward FDIs. While the purpose of the study was solely directed towards testing the exogenous factors as potential entrepreneurial development of the Asean countries making the outward FDIs. The study is particularly beneficial to direct investors, scholars, analysts and researchers, who want to get more acquainted with the exogenous economic factors as determinants of the Asean outward FDIs.

2. Literature Review of Entrepreneurship and FDIs

In the presentation of the research result, the exogenous economic factors were to be predicted as the potential entrepreneurial development of the original Asean countries' outward FDIs. These exogenous factors and their correlation with the FDIs' yearly growths were the main components in the study. Hendry, D.F. (2004) reinforced the above by postulating that "*exogeneity patronized the conditions of independent parameters in a causality formulation leading to the conclusion thatthe normal regression model assumes that all the independent variables are exogenous*." They are basically the Asean countries' capability for spreading its FDIs, which is predicted from the independent variables like the level of output or GDPs it is making, the availability of foreign exchange funds, the weak or strong conditions of its national currency, and level of its exports. Kyrkilis, D. & Pantelidis, P. (2003) for the same reason had studied the function of FDIs with the country specific characteristics as income or GDP, exchange rate, technology, human capital and the openness of the economy, which they said are fundamentally the main determinants of FDIs. Or they expressed this relationship as:

FDIs = f (GDP, Exch, T, HC and OPEN), where
GDP = Income earned,

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Exch = Exchange rate,
T = Technology,
HC = Human capital, and
OPEN = Openness of the economy, for the outward FDI investors.

Based on the concept of Hendry, Kyrkilis and Pantelidis, the exogeniety of an entrepreneurial development of an FDI is presented with modification on Table 2 below. It is supposed to express the details on how exogenous elements could hypothetically be regarded as motivators of the original Asean countries' drive to build up outward investment, which determines the entrepreneurial development.

Table 2: Exogeniety of Entrepreneurial Potential Development

VARIABLE	x	MOTIVE	LOGIC
Consumption (% GDP)	1	Production as entrepreneurial output	More production the more the production
GDP growth %	2	FDI as an expansion strategy	Output growth requires more foreign market
International reserve (% GDP)	3	Foreign exchange Funds to make FDIs	More funds, the more the FDIs
Exports (% GDP)	4	FDIs as a strategy to increase exports	More FDIs, the more captive export markets

Variable 1 and 2 (GDP of the Asean outward FDIs investors)

Learning from the experience of the US, Meier, L. (2013) found that "GDP is the only significant pull factor for the U.S. FDIs to grow. It indicates that large consumption size as a component of the GDP is a major determinant for its FDIs abroad." Zaman, G. & Goschin, Z. (2013) gave another example of how a technical change in the industrial structure of the FDIs recipients is a strong engine in their economic growth, as well as the statement of Usher, D. (1992) pertaining to the bundles of income of people, rather than goods consumed, that would determine the drive to invest.

Another interesting view of causality between national consumption, as part of GDP, and the size of outward FDI was given by Valencia, F. (2010), as he said that "*the baseline optimal consumption rule as a function of the current level of net foreign assets*." In other words the size of an outward FDI = f (consumption as a % of GDP). He depicted this interaction in terms of a consumption rule chart.

Variable 3 (International reserves of the Asean outward FDIs investors)

International reserves and outward FDIs are normally considered as two strong variables for a causality to exist. The unavailability of foreign exchange reserve currencies may lead to the inability to make an outward FDI. As the widely-accepted slogan says, "no money, no FDI." Yusuf, A. & Schindehutte, M. (2000) commented that "*entrepreneurship doesn't work in a declining economy, which drains out its international reserves. These reserve currencies are needed especially when entrepreneurship goes abroad by setting up FDIs*." Entrepreneurial development in the outward FDIs may take place

Variable 4 (Exports of the Asean outward FDIs investors)

Exports and outward FDIs are relatively deemed dependent to each other in general. As the experience of the home base country investors in India that exported more to their outward FDI firms abroad, especially to the Asean region, as found by Pradhan, J. P. (2007), who commented that "*several firm specific characteristics such as age, size, R&D intensity, skill intensity and export orientation are observed to be important explanatory factors in the outward foreign direct investment activity of the Indian firms*." The same support for exports of the firms in the home base country of the outward FDIs, in this case Indonesia, was given through the findings of Lecraw, D. J. (2015), who said that "*performance of Indonesian firms that invested abroad improved dramatically in terms of management expertise, exports and quality.*" Institute of Developing Economies-JETRO (2006) reinforced the same

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support in the experience of the Asean home base firms of the outward FDIs, particularly to the Asean region. The finding was quoted as saying that "*ASEAN enterprises that have extended their business activities within ASEAN, East Asia, and then to the world, as both regional and global players, had improved their export capability.*" The study seconded the finding of exports being the motivator of outward FDIs.

3. Research Methods

In the framework of answering the research questions of the study, the methods of research and procedures focused on a survey of the five (5) original Asean countries that were originally organized and developed by virtue of the Bangkok Declaration of 1967. The study employed the multi variation regression model for determining the predictors of the 4 main exogenous variables and non-parametric statistics for their differences.

In order to answer the first research question, simple descriptive statistics like averages, standard deviations, percentages and rank orders were used. The second research question was answered using the multi variation regressions with unbalanced panel data of the exogenous economic data during the period 2014-2013, properly testing their multi-collinearities and heteroscedasticities of the four variables. A senior statistician, Allison, P. (2013) argued that in spite of this high correlation, indicated by a high adjusted R^2, a variance inflation factor or VIF of less than 2.5 may lead to the ignorance of the multicollinearities. Mertler, C.A. & Vannatta, R.A. (2002) supported this postulate and confirmed the 2.5 standard for multicollinearities and 1.5 for heteroscedascity, suggesting that level of highly correlated independent variables is unlikely. The third question used the Kruskal-Wallis non-parametric statistics to evaluate the differences of the 4 main variables on Table 2. Spurr & Bonini (1979) presented the Kruskal-Wallis formula as follows:

$$H = \frac{12}{n\,(n+1)} \left[(\Sigma\, Ri)^2/n\right] - 3\,(n+1), \text{ where}$$

H = Kruskal Wallis value of χ^2,
Σ Ri = Sum of the ranks of the FDIs growth rates, and
n = Number of years the Asean countries' FDIs grew

4. Result and Discussion

QUESTION 1: Being the largest in terms of purchasing parity prices, Indonesia with a GDP of US$ 1,285 billion on the contrary ranked the lowest in terms of the four exogenous motivators of the five original Asean outward FDIs as of 2013. Singapore and Malaysia aggregately ranked the first and second, respectively, with an average GDP growth of 12.9% (18.4% during 2004-08 and 7.5% during 2009-13) and 9.9 (13.3% during 2004-08 and 6.5% during 2009-13). They were able to develop outward FDIs as much as US$367.8 B and 133.5 B, respectively, not to mention position of their international reserves and exports they made as of 2013. Refer to Appendix A.

QUESTION 2: The dependency between entrepreneurial development and the four exogenous economic factors as motivators to a certain extent would determine the drive of outward FDIs for reasons set forth in Table 2 earlier. As an aggregate observation the study attempted to identify which exogenous factors were related to the decision to set up outward FDIs by the original Asean countries. The analysis revealed that not all Asean countries had demonstrated the drive of being motivated by the four exogenous factors. Singapore and Malaysia didn't indicate such a motivation at all, except for Indonesia, Thailand and the Philippines.

Table 3: F, F Sig and p of the ASEAN Outward FDIs Regression

COUNTRY	R^2	F (Adjusted)	F (Sig.)	*p (0.05 sig)* x1	x2	x3	x4
Indonesia	0.587	4.194	0.074	0.163	0.698	0.480	**0.042**
Malaysia	0.045	1.107	0.445	0.839	0.279	0.213	0.647
Singapore	0.288	1.911	0.247	0.407	0.498	0.271	0.801
Thailand	0.504	3.289	0.112	0.441	0.829	0.577	**0.033**
Philippines	0.882	17.825	0.003	0.336	0.395	**0.005**	0.131

In the case of Indonesia and Thailand an increasing export trend had motivated their entrepreneurs to make FDIs as $p = 0.042$ and $p = 0.033$, respectively, indicated their significance. While in the case of the Philippines the availability of foreign exchange funds were mostly the motivator as $p = 0.005$ for the outward FDIs to develop, in spite of an VIF of 8.47 or > than 2.5, indicating multicollinearity along the way was quite likely. It was computed as VIF = $1/(1 - R^2) = 1/(1 – 0.882)$.

QUESTION 3: Singapore, Indonesia and Malaysia with outward FDIs as much as USD 367.8 B, USD 207.2 B and USD 133.5 B, respectively, not to mention how they had performed with the other variables as of 2013, recorded relatively high FDI yearly growths, even though Thailand had the highest yearly growth of 55.7%. Unfortunately, the Asean outward FDIs didn't seem to demonstrate stable yearly growth during the related decade (2004-2013) in spite of the non-parametric level of $p = 1.96$, which indicated that there were no significant variation among the Asean outward FDIs growth rates.

the Asean outward FDIs didn't seem to demonstrate stable yearly growth during the related decade (2004-2013) in spite of the non-parametric $p = 1.96$ indicating that there were no significant variation among the Asean outward FDIs growths.

5. Findings, Conclusion and Recommendation

Based on the analysis of the research questions, the following were the findings of the study:

1. In terms of the four selected exogenous motivators, Singapore and Malaysia seemed to rank first and second, with Indonesia ranked the fifth or the last.
2. Not all five original Asean countries had demonstrated the drive of being motivated by the four exogenous factors. Singapore and Malaysia didn't indicate such a motivation at all, while Indonesia, Thailand and the Philippines did.

   - Indonesia and Thailand developed outward FDIs with the expectation of expanding their export-based output (p = 0.042 and p = 0.033) that covered mostly electronics and automotive-based products.
   - While the Philippines only developed outward FDIs because entrepreneurs did have the opportunity of possessing the needed foreign exchange funds (p = 0.005) to make such FDIs.

3. There were no significant variations among the Asean outward

FDIs growths in spite of the unstable yearly growth rates during the related decade (2004-13).

Based on the above findings, the study concluded that the four exogenous economic variables; the GDP consumption and growth, international reserves and exports, didn't all function as motivators to the entrepreneurial development of the five original Asean countries' outward FDIs, except for Indonesia, Thailand and the Philippines.

Learning from the aggregate observation, let the exogenous motivators be the bases for entrepreneurial development toward more Asean outward FDIs, particularly for the following objectives:

1. To support expansion of Asean countries' export business.
2. To develop more Asean outward joint ventures as strategic subsidiaries of Asean business.
3. To establish more Asean business licensing and franchising through the Asean outward FDIs.

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Appendix A. Rank of the 4 Exogenous Motivators of Asean Outward FDIs

ASEAN COUNTRY	C%	GDP g %	Intl Res %	Exp/GDP	Latest GDP	Outward FDIs	Int Reserves	Exports
Indonesia					1,285.0	207.2	83.3	178.9
* 2004-2008	75.8	4.1	5	10.4				
* 2009-2013	72.1	7.1	7.1	14.7				
Malaysia					525.0	133.5	139.4	230.7
* 2004-2008	73.8	13.3	25.3	45.7				
* 2004-2008	72.8	6.5	26.9	46.9				
Singapore					331.9	367.8	273.0	410.3
* 2004-2008	81.4	18.4	85.1	133.9				
* 2009-2013	55.8	7.5	77.1	122.5				
Thailand					673.1	65.1	176.1	225.4
* 2004-2008	76.2	3.1	13.1	20.8				
*2009-2013	75.5	4.8	22.9	32.9				
Philippines					454.3	9.4	85.0	47.5
* 2004-2008	85.8	-2.5	7.3	11.5				
* 2009-2013	89.4	7.5	17.7	11.8				
Rank of Exogenous Motivators by Asean Countries:								
Indonesia	4	3	5	4	FDI g: Max 84.1% and min 7.4%			
Malaysia	3	2	2	2	FDI g: Max 47.5% and min 9.1%			
Singapore	5	1	1	1	FDI g: Max 95.4% and min 2.8%			
Thailand xx	2	4	3	3	FDI g: Max 83.3% and min 0.5%			
Philippines	1	5	4	5	FDI g: Max 27.6% and min 1.8%			

Source: www.indexmundi.com/g/g.aspx?v=65&c=id&l=en

LEGEND: (1) C% = consumption/GDP. GDP g% = growth of GDP. Intl res % = international reserve as % GDP. Export % = export as % GDP. (2) Latest GDP, outward FDIs, international reserves and exports, are expressed in terms of billion USD. (3) g = growth percentage per year.