Determinants of Foreign Direct Investment (FDI) in Asean-5 Countries: A Review

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ABSTRACT

The foreign direct investment (FDI) inflows play an important role in achieving a country's economic development. Hence, this study aims to investigate the main determinants of FDI inflows in ASEAN-5 countries (Indonesia, Malaysia, Philippines, Singapore, and Thailand). Using five explanatory variables (market size, inflation rate, trade openness, exchange rate and consumption tax (GST)), this study tries to investigate the factors that determine FDI inflows to the studied countries. To achieve this objective, this study will utilise Autoregressive Distributed Lag (ARDL) and Nonlinear Autoregressive Distributed Lag (NARDL) approaches to investigate the long-run relationship between the explanatory variables and FDI inflows. The NARDL model is applied to examine the asymmetric effect of exchange rate on FDI inflows. Based on a comparative discussion, the study results will demonstrate what are the common factors will attract or discourage FDI inflows into the ASEAN-5 countries. This research also indicates if FDI inflows react differently during an appreciation or a depreciation on host country currency. This study has significant implications for the body of knowledge and practitioners. The effect of GST and asymmetric effect of exchange rate will add the existing body of knowledge of FDI inflows in the studied countries. Meanwhile, policymakers from the sample countries would be able to understand the importance of the main determinants of FDI inflows to their respective countries. Hence, steps could be

taken to utilize the factors to attract FDI inflows. Furthermore, knowledge about the asymmetric effect of the exchange rate will also help the policymakers in adopting appropriate policies to accommodate the asymmetry. The sample of countries from Southeast Asian countries has not been extensively investigated in the literature regarding the GST effect and asymmetric effect of exchange rates on FDI inflows motivated this study in this area.

INTRODUCTION

According to Al-Qaisi (2017), FDI is a long term investment made by a foreign individual investor or institutional investor in a domestic country in order to achieve certain financial goals. Some previous studies (e.g., Alsan, Bloom, & Canning, 2006; Ullah, Shah, & Khan, 2014) have indicated that FDI can help to boost up a nation's economic growth in a few ways. First and foremost, FDI can help to improve the overall economic performance of the host country through investment in investible resources and massive capital into the industry in the host country. The investment can lead to the creation of new job opportunities for local unemployed because foreign investors will tend to set up new factories and plants in the host country that requires employees (Stamatiou & Dritsakis, 2013). Secondly, FDI can also help to increase the recipient country's overall production level through the diffusion of technology transfer, skills, and innovative capacities into the recipient countries (Alsan et al., 2006; Ullah et al., 2014). Furthermore, FDI will also help to transfer professional organizational and managerial skills from foreign MNCs to a domestic corporation (Chen, 2011). Therefore, as compared with domestic investment, FDI is said to be more productive in the sense that it will bring value-added to the host country (Lim, 2014). Hence, FDI plays an important role in boosting up economic growth and help to develop the host country (Stmatiou & Dritsakis, 2013).

In fact, many researchers have investigated the main determinants of FDI inflows both in developed and developing countries. Root and Ahmed's (1978) work is one of the earliest studies that investigated the determinants of FDI in three groups of developing countries (unattractive, moderately attractive and highly attractive) which consists of 44 different economic, social, political and policy determinants. The determinants mentioned in Root and Ahmed's (1978) work have repeatedly been investigated in the empirical studies focusing on FDI attractiveness, mostly on economic determinants. Some of the main determinants are market size, inflation, trade openness and exchange rates. Among the economic factors, the exchange rate is one of the controversial factors investigated in recent days (Baek & Okawa, 2001; Bekhet & Al-Smadi, 2015). Mixed studies have been found in the literature on how the exchange rate affects FDI inflows with some studies indicated a positive relationship between the variables, while some have shown a negative relationship (Moosa, 2002). Others have shown no significant relationship. Even though the exchange rate has been identified as one of the determinants of FDI inflows, most previous studies have assumed the asymmetric relationship between the two variables. However, there is the possibility that the reason for no relationship because there is an asymmetric relationship between exchange rate and FDI. Furthermore, the studies on how FDI inflows react to exchange rate differently is still less investigated in the ASEAN region.

Besides, under the policy determinant, tax policy typically emerges as one of the leading discussion of factors that can either attract or drive away FDI. However, the evidence that taxes influence the FDI inflows is also mixed. Some researchers (e.g., Becker, Fuest, & Riedel, 2012; Merz, Overesch, & Wamser, 2017)stricter (equity suggest that the level of FDI depends on tax factors, but some studies (Jones & Temouri, 2016; Root & Ahmed, 1978) conclude that taxes have a weak effect

on FDI. Furthermore, a positive relationship also has been reported (Swenson, 1994). Thus, there is a need to reassess the taxes and FDI relationship because there is still less attention has been given to the role of consumption tax as compared to corporate and capital income taxes especially in ASEAN countries. Apart from Indonesia, most of the ASEAN countries implemented GST staring from mid of the 1990s. Therefore, the main objective of this paper reinvestigates the main determinants of FDI in ASEAN-5 countries with emphasis on the effect of GST implementation and the asymmetric effect of exchange rate FDI inflows.

RELATED FDI THEORIES

There here have been several theories that have developed in FDI literature. These theories have subsequently been grouped into micro and macroeconomic approaches. In this study, macroeconomic theories will be used. The macroeconomic theories seek to analyse country-specific characteristics that explain FDI inflows in host countries which are Product Life Cycle and Eclectic Theories.

Product Life Cycle Theory

Vernon's (1966) product life-cycle hypothesis postulates that firms engage in FDI at a stage in the life cycle of products that it had initially innovatively produced. The theory is production-oriented which focusing on the production of industrial goods in manufacturing sectors. Due to their economies of scale, easy access to markets and efficient communication process, new products or initial production takes place in domestically developed countries. Other countries are initially served through exports and once a customer base is established, offshore production usually follows. The maturity stage of the product life cycle only occurs when production methods are completely standardised, and markets become saturated in emerging and less developed countries too.

Therefore, this theory seems to suggest that market size, cost of production and market openness are important determinants of FDI.

Eclectic Theory

The eclectic theory attempts to answer the question of why a firm would want to produce in a foreign location instead of exporting or entering into a licensing arrangement with a local firm. According to Dunning (1988), three conditions must be satisfied for a firm to engage in FDI. These are ownership (O), locational advantages (L) and internalisation, whose combination subsequently came to be known as the 'eclectic theory' or 'OLI paradigm'. 'Ownership advantages' entail advantages that arise from the ownership of some intangible assets, such as access to raw materials, enhanced technology, and competitive advantages over similar firms. 'Locational advantages' occur in scenarios where expansion by a firm may be accomplished either at home or in a foreign country. Accordingly, some foreign countries may have certain advantages, such as the size of the local market, availability of resources, relative inflation levels, government incentives, and other location variables. Finally, 'internalisation advantages' would be of importance in situations where multinationals must choose between accomplishing further expansion internally, or by virtue of selling the rights to that expansion to other firms. Hence, the 'eclectic theory' highlights several possible determinants of FDI, including market size, inflation levels, government incentives and access to raw materials.

EMPIRICAL LITERATURE REVIEW

Consistent with the abovementioned theories, some main determinants of FDI have been investigated both in developed and developing countries. Yet, census on what are the common factors that attract FDI has not been concluded yet.

Market Size and FDI

According to some previous studies (e.g., Ang, 2008; Athukorala & Waglé, 2013; Lim, 2008; Luiz & Charalambous, 2009), the market size has been proved to be one of the most important determinants of FDI by numerous past empirical studies. Past studies have applied different measure of market size including gross domestic product, GDP per capita, GDP growth rate and real GDP (e.g., Cleeve, 2008; Culem, 1988; Kalyoncu, Tuluce, & Yaprak, 2015; Karim & Othman, 2005; Lunn, 1980; Voka & Dauti, 2015). Artige and Nicolini (2005) stated that majority of studies use GDP and GDP per capita as a proxy for market size and it is found that there is a positive relationship between market size and FDI inflows to the country. It indicates that an increase in market size is associated with an increase in FDI inflows into host economies. Moreover, Zenasni and Benhabib (2013) found that a similar result where greater salary levels are a measure for the extension in the market size and purchasing power.

The positive relationship relates to the locational advantages in OLI paradigm. Host countries with higher GDP per capita will offer higher and better chances for the industries to utilize their own advantages and thus, will attract more inflows of foreign investment that are market-seeking. In addition, Asiedu (2002) but have no significant impact on FDI to SSA; (ii indicated that the market size of a country represents the potential demand for the country's output and its economic conditions. Therefore, it is an important element that will determine the foreign direct investors' investment in a country. From the study of Sharma and Bandara (2010), investors are easily attracted to a large expanding market. This is due to a market that is small and unable to expand rapidly does not possess any inherent attractiveness. Apart from that, Jordaan (2004)or those having inferior or inadequate policies compared to developed or other developing countries, run the risk of becoming comparatively less competitive in the global economy. With the goals set out in the United Nations Millennium Declaration and NEPAD initiatives, and given the advantages of foreign direct investment (FDI mentioned that FDI will move to countries with larger and extending markets and higher purchasing power, where the company can potentially receive a greater profit on their capital and by implication gain higher revenue from their investments. Additionally, Charkrabarti (2001) contended that the market-size hypothesis supports an idea that a large market is required for efficient utilization of resources and exploitation of economies of scale. This is because as the market size grows to some critical value, FDI will start to increase thereafter with its further expansion. Hence, this hypothesis has been supported and a variable representing the size of the host country market has come out as an explanatory variable in nearly all empirical studies on the determinants of FDI.

As mentioned above, it is necessary to consider market size as an important factor in determining FDI inflows in a country (Asiedu, 2002)but have no significant impact on FDI to SSA; (ii. However, at the same time, it is not the only factor influencing FDI. Medvedev (2012) argued that the barrier of trade in a country will affect the FDI inflow to the country even when the market size is large which contributes either different relationship sign or insignificant relationship. As an example, a study by Wafure and Nurudeen (2010) and Bevan and Estrin (2004) found that GDP has a significant but negative effect on the FDI. In addition, despite the increasing country size, foreign investors are less willing to invest in a country in which they have less penetrability on the economy (Wafure & Nurudeen, 2010).

Inflation Rate and FDI

According to Erramilli and D'Souza (1995), a host country's economic instability can be a major restrictive to FDI inflow. They found out any form of instability introduce a form of uncertainty that distorts investors' perception

of future profitability in the country. Besides, Ajayi (2006) stated that "low" inflation is taken to be a sign of internal economic stability in the host country. On the contrary, "high" inflation indicated the inability of the government to balance its budget and the failure of the central bank to conduct appropriate monetary policy. Based on Ahn, Adji and Willett (1998), inflation can be used as an indicator of the economic and political condition of the host country, but the differences between "high" inflation and "low" inflation are not distinct.

Furthermore, some literature offers some distinctions on the level of inflation. For instance, Reinhart and Rogoff (2002) indicated that high inflation does not happen in the absence of other macroeconomic problems. However, the cost of inflation can have a prominent effect on the economy's growth, especially this hindrance is more prominent at an inflation rate at 40% and higher. Moreover, they also noted that a country with a higher inflation rate, especially below the 40% level, is worse off than a country with slightly lower inflation. The comparative figure they quoted was 10% compared to 5%.

In addition, Glaister and Atanasova (1998) mentioned that the effect of high inflation had on employment in Bulgaria. Although they did not draw direct inferences to the relationship between the inflation rate and FDI, they seem to suggest that high inflation can cause various problems within the country to reduce its attractiveness to foreign investors. Other than that, Coskun (2001) suggested that lower inflation rate coupled with other factors such as "full membership with the EU" and high economic growth can attract foreign investors and increase the FDI inflow into Turkey. Finally, Wint and Williams (2002) showed that a stable economy attracts more FDI. Hence, a low inflation environment is desired in countries that promote FDI as a source of capital flow.

Trade Openness and FDI

Generally, previous literature implied that a country's willingness to accept foreign investment is important to the FDI inflows into host countries which can be translated from the level of trade openness of the host countries. Previous studies (e.g., Culem, 1988; Demirhan & Masca, 2008; Kariuki, 2015; Kravis & Lipsey, 1982; Liargovas & Skandalis, 2012; Moosa & Cardak, 2006; Ngendakumana & Kaseke, 2015; Rohra & Chawla, 2015; Wahid, Sawkut, & Seetanah, 2009)using a sample of 36 developing economies for the period 1990-2008. It provides a direct test of causality between FDI inflows, trade openness and other key variables in developing regions of the world: Latin America, Asia, Africa, CIS (Commonwealth of Independent States contended that trade openness is one of the key factors that have a strong positive impact on FDI inflows.

Studies in developing countries also indicated the same pattern on how trade openness attract FDI. On the other hand, the recent empirical study has proven that trade openness contributes significantly to FDI. This is also supported by Xaypanya, Rangkakulnuwat, and Paweenawat (2015) who claimed that the level of trade openness has a positive effect on FDI inflows in ASEAN 3. Based on Balasubramanyam, Salisu, and Sapsford (2006) and Addison and Heshmati (2003)the distribution of FDI is highly unequal and very poor countries face major difficulties in attracting foreign investors. This paper investigates the determinants of FDI inflows to developing countries, with a particular emphasis on the impact of the 'third wave of democratization' that started in the early 1980s and the spread of information and communication technology (ICT, FDI is a major element of economic growth and has a positive impact in developing countries only for countries that have openness and promoting export policy. Aside from that, Suleiman, Kaliappan, and Ismail (2015)

examined FDI determinants in the situation of the Southern Africa Customs Union (SACU) member indicated that trade openness has a positive and significant effect on FDI. From the study done by Albert and Stuart (2008), their study also indicated a positive relationship between trade openness and FDI in Sri Lanka. According to Chantasasawat, Fung, Lizaka and Siu (2010), the result is found to be the same with the previous study which showed a positive significant relationship. Furthermore, the study also interestingly stated that the openness of a country includes the degree of both tariff and nontariff measures. Therefore, the reductions in different types of trade barriers will in turns increase FDI in a country.

Other than that, Awan, Khan, and Zaman (2011) also found out that the degree of trade openness is highly significant with FDI inflows. In their study, they applied the sum of exports and imports each year as an indicator of trade openness. Ismail and Yussof (2003) also found that the openness to trade is expected to have a positive correlation with FDI inflow due to total trade is the sum of import and export that shows the openness of economic. Moreover, Srinivasan, Kalaivani and Ibrahim (2011) also found that the openness of trade is positive and statistically significant to the FDI inflows. The findings imply that foreign investors would prefer making an investment in countries with a higher degree of trade openness. Hence, it is an obvious fact that investors will more likely make an investment in those countries which have opened to the outside world.

Nevertheless, there are a few researchers found that due to certain economic factors and trade conditions, trade openness also may have resulted in a negative and insignificant effect on the FDI inflows. For instance, Kolstad and Villanger (2008) found that trade openness is insignificant in explaining the inflows of FDI. There has a similar study conducted by Busse and Hefeker (2007) which confirm the relationship and add that trade openness negatively affects FDI inflows.

Besides that, in the research of Goodspeed, Martinez-Vazquez, and Zhang (2007), they pointed out the effect of trade openness on FDI is inconclusive because thus far different studies show different results. According to Kolstad and Villanger (2008) and Asiedu (2002) but have no significant impact on FDI to SSA; (ii, trade openness is insignificant towards FDI in Africa than in other developing countries. Hence, their results showed that African countries have received lower FDI because of less trade openness.

Exchange Rate and FDI

Many studies have been conducted by some researchers to investigate the relationship between exchange rate and FDI inflows which showed mixed results and varied across countries. Some studies have indicated FDI has a positive relationship with the exchange rate, some with the negative relationship while others showed an insignificant relationship. In general, the different sign of relationship depends upon the exchange rate measure applied by the researcher. For example, previous studies have applied different measure for exchange rate including nominal, real, volatility and trade-weighted index. With intensive studies in developed countries, researchers began to study if the exchange rate is an attractive factor for FDI inflows in developing countries. For instance, a study by Omorokunwa and Ikponmwosa (2014) in Nigeria indicated a strong positive effect in the long run, which they claimed because of arbitrage activities in the foreign exchange market in the long run. Meanwhile, some researchers argued that a negative relationship exists between the exchange rate and FDI. For instance, Melku (2012) investigated exchange rate volatility and foreign direct investment by using panel data in sub-Sahara Africa. He found a significant negative impact of exchange rate volatility on foreign direct investment, out of that a 1% increase in exchange rate volatility results in 0.11% falls in foreign direct investment in the long run. The result of the

study supported by the Ogunleye (2009) study findings on the relationship between exchange rate volatility and FDI in a country case focus on South Africa and Nigeria.

Furthermore, Osinubi and Amaghionyeodiwe (2009) applied time-series data from 1970 to 2004 to examine the effect of exchange rate volatility on foreign direct investment (FDI) in Nigeria. They found a negative impact on real inward FDI which could be because of the deregulation that was accompanied by exchange rate volatility. Moreover, Chen, Rau and Lin's (2006) study in Taiwan revealed that the relationship between exchange rates and FDI is crucially dependent on the motives of the investing firms. Besides that, exchange rate uncertainty had a negative impact on Taiwanese firms' FDI, particularly for those firms facing considerable sunk investment costs.

Even though there is a significant relationship between the variables in developing countries, but some studies indicated that the relationship tends to be weak. For example, in Nyarko, Nketiah-Amponsah, and Barnor (2011) study in Ghana using time series data over a 39 years period (1970-2008), they indicated that the exchange rate regime has a weak relationship (10% level) with Ghana's FDI inflows. A study by Kapur (2004) also indicated similar findings where there is a weak relationship between exchange rate volatility and FDI inflows in Nigeria, both in the long run and in the short run. With mixed results on the relationship between exchange rate and FDI in previous literature, there is a possibility of the existence of an exchange rate asymmetry effect on FDI inflows (El Bejaoui, 2013; Koutmos & Martin, 2007; Muller & Verschoor, 2006). Under the assumption of symmetry, FDI will react towards the exchange rate during appreciation and depreciation differently. The asymmetric effect of exchange rate risk on FDI inflows in ASEAN countries could be due to the central bank's intervention and asymmetric

hedging behaviour of MNEs. The central bank's intervention on the exchange rate generates uncertainty in the market about the true value of the exchange rate (McKenzie, 2002; Suardi, 2008). Furthermore, most ASEAN countries adopted managed floating exchange rate regimes, where the role of the central bank in managing the exchange rate is significant (Lily, Kogid, Mulok, Thien Sang, & Asid, 2014; Parsley & Popper, 2006; Tan & Chong, 2008; Xing & Wan, 2006). The central bank will intervene against the foreign exchange rate if the exchange rates go beyond its desirable rate by buying and selling the foreign reserves or changing the interest rate (Patnaik, Shah, Sethy, & Balasubramaniam, 2011). Meanwhile, based on the objective of the MNEs (market-oriented or export-oriented), most usually take only one-sided hedges where the firm managers perceive greater risk in terms of outcomes involving a loss rather than in terms of the dispersion of outcomes, suggesting an asymmetry with positive and negative changes in exchange rates (Iorio, Faff, Di Iorio, & Faff, 2000; Koutmos & Martin, 2003). Therefore, the asymmetric hedging behaviour could be one of the sources for an asymmetric effect of the exchange rate on FDI.

Taxation and FDI

The study of Devereux and Freeman (1995) is one of the pioneer studies that examine empirically the role of taxation on the choices about foreign direct investment (FDI). By using data of seven major trading countries covering the period 1984-1989, they concluded that the choice between domestic and outward foreign direct investments is not affected by taxation. Nevertheless, they also suggested that the choice of the location of outward foreign direct investments is affected by taxation.

Furthermore, more recent studies have reached a significant relationship between taxation and foreign direct investment. For instance, the study of Gropp and Kostial (2000) is one of the first papers that established an

empirical link between corporate tax revenues and foreign direct investment, not just corporate income tax rates. Besides that, they concluded that taxes indeed play an important role in FDI inflows. In addition, Gorter and Parikh (2003) investigated the effects of the changes in the corporate tax rates of an EU country on the FDI, and they confirmed the effectiveness of the tax rates. Similarly, Çak and Karakaş (2009) explored the determinants of FDI where corporation tax rates and total tax burden have a negative significant relationship with FDI inflows.

On the other hand, there also some studies that focus on various kinds of taxes. For examples, Desai, Foley, and Hines (2001) examined the impact of indirect (non-income) taxes on FDI by American multinational firms. Their empirical findings suggested that higher local indirect taxes lower the level of FDI and output. Besides, the study of Beck and Chaves (2011) is another study that pays attention to the effects of various taxes not only capital income taxes on FDI in 25 OECD countries covering the period 1975-2006. Their results pointed out an increase in capital income tax rates has a negative effect on FDI, while increases in labour income tax rates have the opposite effect. Moreover, they indicated that increases in consumption tax rates have no statistically significant effect on the level of FDI.

PROPOSED RESEARCH FRAMEWORK AND METHODOLOGY

Proposed Research Framework

Based on the discussion on the literature review on key determinants FDI inflows, Figure 1 shows the proposed research framework of this study.
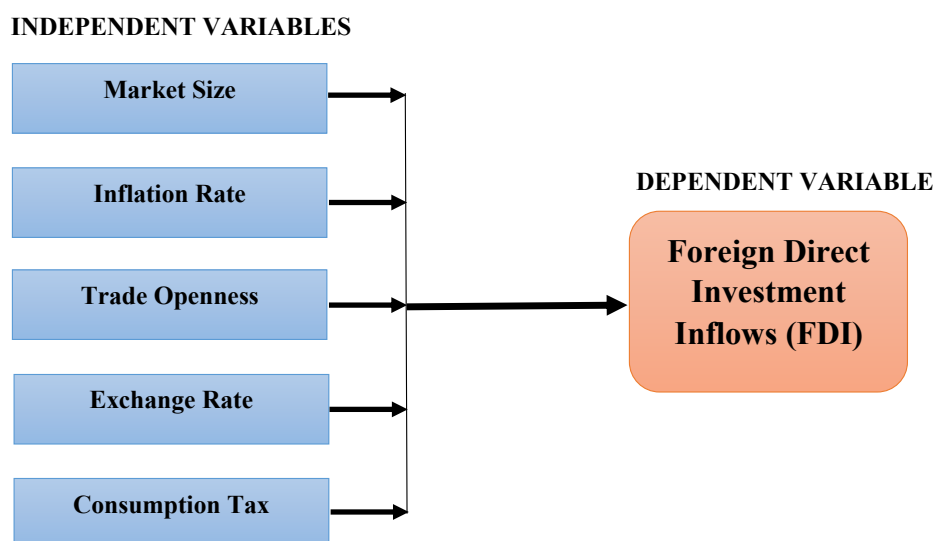

Figure 1 Proposed research framework

Data and Sample

The present study selected five ASEAN countries, namely Indonesia, Malaysia, Philippines, Singapore, and Thailand. Besides that, this study will apply annual data (1980 – 2018) depending upon the availability of data for each sample countries. Data will be obtained from multiple sources such as the World Bank Database and International Monetary Fund (IMF) Database. The data consist of FDI inflows, market size (GDP), inflation rate (INF), trade openness (TO), real effective exchange rates (REER), consumption tax (GST).

Empirical Model

The empirical model consists of two different models namely symmetric model and the asymmetric model. Equation 1 is the symmetric model. Meanwhile, Equation 2 is the asymmetric model.

$$FDI_t = \alpha_0 + \alpha_1 GDP_t + \alpha_2 INF_t + \alpha_3 TO_t + \alpha_4 REER_t + \alpha_5 Dtax_t + \varepsilon_t \tag{1}$$

$$FDI_t = \alpha_0 + \alpha_1 GDP_t + \alpha_2 INF_t + \alpha_3 TO_t + \alpha_4 REER_t^+ + \alpha_5 REER_t^- + \alpha_6 Dtax_t + \varepsilon_t \tag{2}$$

Table 1 The dependent and independent variables

Variables	Proxy	Symbol	Expected Sign
Dependent Variable			
Foreign Direct Investment	Foreign Direct Investment Net Inflows	FDI	N/A
Independent Variables			
Market Size	Gross Domestic Product	GDP	+
Inflation Rate	Consumer Price Index	INF	−
Trade Openness	Total Export and Import	TO	+
Exchange Rate	Real Effective Exchange Rate	$REER$	+/−
Consumption Tax (GST)	Dummy (D=1: GST Implementation)	$Dgst$	−

Hypothesis Testing

This study will apply both symmetric (Pesaran, Shin, & Smith, 2001) and asymmetric ARDL (Shin, Yu, & Greenwood-Nimmo, 2014). Equation 2 can be framed into the NARDL as followed:

$$\Delta FDI_t = \beta_0 + \beta_1 FDI_{t-1} + \beta_2 REER_{t-1}^+ + \beta_3 REER_{t-1}^- + \beta_4 GDP_{t-1} + \beta_5 INF_{t-1} + \beta_6 TO_{t-1} + \beta_7 Dgst_{t-1}$$
$$+ \sum_{i=1}^{p} \phi_i \Delta FDI_{t-i} + \sum_{i=0}^{q} \varphi_i \Delta GDP_{t-i} + \sum_{i=0}^{r} (\theta_i^+ \Delta REER_{t-i}^+ + \theta_i^- \Delta REER_{t-i}^-) + \sum_{i=0}^{s} X_i \Delta INF_{t-i} + \sum_{i=0}^{t} \eta_i \Delta TO_{t-i} + \varepsilon_t \tag{3}$$

Where the $REER^+$ and $REER^-$ represents the partial sums of positive and negative changes in:

$$REER_t^+ = \sum_{j=1}^{t} \Delta REER_j^+ = \sum_{j=1}^{t} \max(\Delta REER_j, 0), \quad REER_t^- = \sum_{j=1}^{t} \Delta REER_j^- = \sum_{j=1}^{t} \min(\Delta REER_j, 0) \tag{4}$$

The term $\sum_{i=0}^{r} \theta_i^+$ measures the short-run influences of positive changes in the conditional variance of the real exchange rate while $\sum_{i=0}^{r} \theta_i^-$ measures the short-run influences of negative changes in the conditional variance of the real exchange rate. From equations (2) and (3), both $\alpha_4 = -\beta_2 / \beta_1$ and $\alpha_5 = -\beta_3 / \beta_1$ represent the long-run impacts of an increase and decrease in *REER* on FDI inflows. To test for the long-run relationship at a level among the variables, Wald F test of the null hypothesis of $H_0 : \beta_1 = \beta_2 = \beta_3 = \beta_4 = \beta_5 = \beta_6 = \beta_7 = 0$ as in standard ARDL model (see Pesaran et al. (2001) and Shin et al. (2014) for more details on the test procedure). If the long-run relationship exists, then an examination of long-run and short-run asymmetries for *REER* using the Wald F test can be done on the null hypotheses of $H_0 : -\beta_2 / \beta_1 = -\beta_3 / \beta_1$ and $\sum_{i=0}^{r} \theta_i^+ = \sum_{i=0}^{r} \theta_i^-$ respectively.

CONCLUSIONS

To sum up, although there is much literature about the determinants of FDI, there is still less attention on the effect of consumption tax especially GST, and asymmetric effect of exchange rate on FDI in ASEAN countries. Hence, there is a need to reinvestigate these issues to fill the gap in the literature in the context of ASEAN countries. Therefore, the study results will provide a comparative analysis on which were the main determinants across sample countries which has not been investigated intensively. In addition, this paper will add the current body of knowledge on the non-linearity relationship between exchange rate and FDI. Additionally, knowledge on how GST affects the FDI inflows across countries will enlighten the FDI research on taxes. This information may open new opportunities for researchers to do more research on these studied variables in different scenario and context.

Practically, these study findings will then help policymakers in ASEAN countries to have a better understanding of the main determinates of FDI which will then provide an appropriate recommendation for attracting FDI into host countries. Policymakers can benefit from the study findings such as the asymmetric effect of exchange rate on FDI inflows, in order to plan their mitigation strategy implementation to deal with any negative economic changes. Hence, it will help to maintain the economy in a stable condition.

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