

GENDER EQUALITY IMPACT ON FOREIGN DIRECT INVESTMENT GROWTH OF ASEAN COUNTRIES

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Abstract

ASEAN become one of the main destination location for Foreign Direct Investment (FDI) however its FDI growth showed a declining trend. On the other hand, gender equality of this region keep progressing over time and surpassed the global average gender equality index. This paper examined the effect of gender equality on the growth of foreign direct investment inflows using static panel model for eight ASEAN countries for 2010-2016 period. Our result showed that gender equality could boost the FDI inflow growth through the increase of labor force participation and tertiary education. Labor force participation able to enhance the effort of boosting FDI growth through the macroeconomic channel such as GDP growth, infrastructure, inflation, interest rate and exchange rate.

Keywords: ASEAN, FDI growth, gender equality, panel data, panel least square

1. INTRODUCTION

Investment holds an important key for social, economic and political development of a nation. Not only generates income, it also enhances economy's producing capacity through the increase of capital stock. When a country, especially developing countries such as ASEAN countries is unable to create sufficient investable fund from its domestic sources, foreign sources capital remains an important part for economic sustainability (Hossain and Chowdury 1998). One of the foreign capital form is foreign direct investment (FDI), which is an investment made to acquire a lasting interest to have an effective choice in the management of the enterprise in foreign country according to The United Nations Conference on Trade and Development (UNCTAD).

Therefore, FDI considered to be the engine of economic growth, since modernization theory suggests that economic growth requires capital investment. Moreover, the new growth theory highlights that it is the knowledge transfer through FDI to the developing countries that are scarce in the necessary infrastructure and education. Multinational corporations' investment in the host country imposes the pressure on the local firms to develop new technologies and innovate. Besides, FDI also brings to the host country a set of managerial skills and marketing knowledge (Adams 2009). The importance of FDI on economic growth also confirmed by Yaseen (2014) in the study of FDI in Jordan, Najib et al. (2013) of Pakistan's FDI and Melnyk et al. (2014)

Economic growth is vital and desirable for every country since it is the indicator of nation's welfare. Economic growth increases incomes and hence living standards. It reduces unemployment, manages the business cycle and is linked to reducing poverty and increasing social equity (Clarke 2003). Therefore, many researches have emerged to confirm the contribution of FDI on economic growth. Research by Alfaro et al. (2004) suggested that FDI plays an important role in contributing to economic growth when level of development of local financial markets is also taken into consideration. This finding confirmed by Cahyono, studying the matter in Indonesia in 2013, where FDI affect economic growth positively and has larger effect than the domestic investment.

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Furthermore, a causal relationship between the two variable discovered by Mohammed Abbas et al (2014). The results indicated that unidirectional causality exists between foreign direct investment and economic growth for Asia and oceanic, Middle East, North America North Africa and central Africa. Moreover, there is bidirectional causality FDI and GDP for Latin America and Europe. This is also one of the finding resulted from Alfredo, et al. study in 2004, where the link between FDI and growth is causal, which is when FDI promotes growth through financial markets.

FDI also proved to be resilient during crisis period. After the global crisis of 1998, FDI in Association of Southeast Asia Nations (ASEAN), for example, start to bounce back five years span after the crisis. The global crisis in 2008 again cause the inflow on this region to sink. However, the recovery takes shorter time than the one in 1998, which shows ASEAN resilience in enduring crisis and maintain sound environment to attract investment.

Such benefits have encouraged the developing nations, including ASEAN countries to focus themselves for attracting FDI inflows, which is evident by its amount of inflow and inward stock compared to another country. ASEAN account for 28% of Asia’s FDI inflow and 9% of the world’s FDI inflow by the latest 2017, also 7% of world’s inward stock by 2016. ASEAN occupied the fourth position largest FDI Inflow receiver following respectively, United States, United Kingdom and China. in 2013 the ASEAN – 5 (Indonesia, Malaysia, Philippines, Singapore and Thailand) received greater inflows in amount of \$128.4 billion than China for \$117.6 billion according to United Overseas Bank (UOB). On the other hand, by FDI inward stock, ASEAN (Brunei Darussalam, Cambodia, Indonesia, Lao People's Democratic Republic, Malaysia, Myanmar, Philippines, Singapore, Thailand, and Viet Nam) filled the second largest position after US, competed Hong Kong, China, UK, and Canada. Among numerous determinants of growing FDI inflow, labor wage is one of the most important factor. Investment largely depends on wage levels, that there is a positive correlation between FDI and labor costs differential in research by Hubert Janicki in 2004. He found that, a change of \$1 in the annual wage difference between the host and source economy in the manufacturing sector results in a corresponding change of US\$17,278 of FDI. Therefore, cheap labor is particular interest for countries whose wage levels are high, and where firms are looking to reduce costs by relocating production to a region where resources are available at a lower cost. This finding is in contrast with research by Bahar Bayraktar-Saglam in 2017 which he found that, a fall in the unit labor costs encourages FDI, which supports the cost seeking motive of FDI.

Specifically, in Asia including ASEAN. There has been a regional shifting in the flow of FDI. Studied by Daniel Allen (2014), the most significant driver of regional change is the rise in production costs in China’s traditional manufacturing centers, wage rise mean Chinese and foreign companies are already moving their low-cost manufacturing operations to countries such as Vietnam and Cambodia. Chinese manufacturing wages, which have risen annually by over 10 per cent for the past few years, are already significantly higher than those in Thailand, Indonesia and Vietnam. Workers’ wages in Ho Chi Minh City, for example, averaged US\$120 a month in 2015, a third of the average figure in Guangzhou. Salaries in Jakarta even half the amount of that in Dongguan. Therefore, compared with China (especially with the pace of rapid economic development of China) labor costs in Vietnam and Indonesia are now much cheaper

Table 1 ASEAN-China labor wage comparison

Region	Minimum wage monthly (US\$)	Average wage
ASEAN		
Myanmar	65	70-90
Cambodia	75	100
Vietnam (Ho Chi Minh City)	110	120
Thailand (Bangkok)	230	230
Indonesia (Jakarta)	228	228
China		
Guangzhou	295	760
Dongguan	210	420

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The emergence of this topic is provoked by the existence of disparity in ASEAN labor force market between male and female. According to World Economic in 2016 gender wage gap in ASEAN are as high, Thailand and Singapore as 37%; Brunei Darussalam as 23% and 28% in Cambodia. This fact raises a question whether gender inequality might be profitably exploited by foreign investors. As another gender inequality aspect such as access to health and education creates a pool of low paid workers which will reduce the labor cost (Brainard 1997). Therefore, many research has emerged regarding this issue.

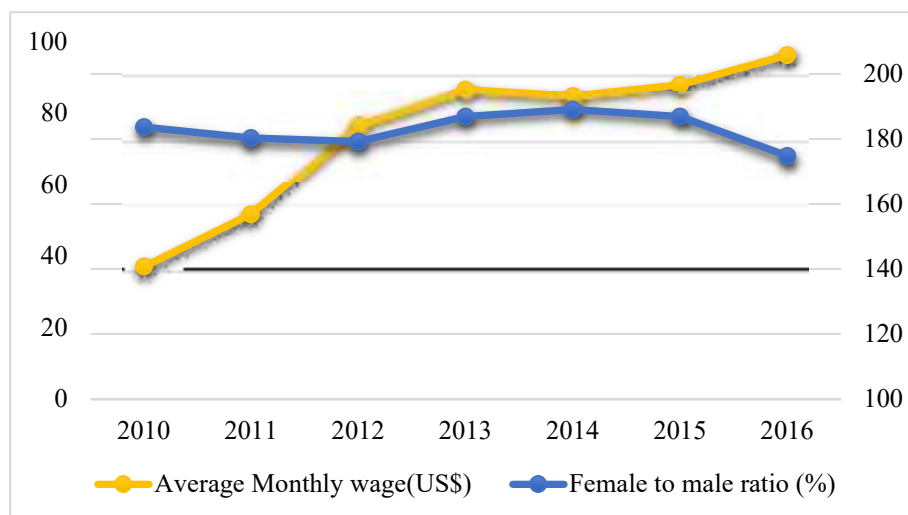


Figure 1. Wage Ratio between male and female compared to the monthly Wage each years of ASEAN Countries 2011- 2016

The changing role of women and growing awareness of their economic inequality with respect to men have brought international attention to gender issues. According to ASEAN secretariat, unlike in South Asia, sex selection at birth do not practiced by ASEAN member countries, therefore the number of female population show a slightly higher number than males. In recent years, the position of women in society also improved in the region. The number of women holding public office has grown, especially in local government. Obtaining vocational skills and academic qualifications is far more possible now, With the exception of Cambodia and Laos, the numbers of women progressing to post-secondary training is also rising. The expansion in education has contributed to the blossoming of female-oriented Non-Governmental Organizations (NGOs) since the 1980s, which have given the knowledge and organization skills that equip them participate more in economic roles, although it is still lower than male, both for labor force participation rate and pre secondary education or training (Meng 1998).

According to Asia Development Bank, with relatively low education level, limited access to economic opportunities and socio-cultural norms and culture, women are more likely to hold lower-quality employment or vulnerable employment (own-account work and unpaid contributing family member). FDI in this region mostly concentrating their more labor-intensive activities where labor costs are lower and more capital-intensive activities where capital costs are lower, as Brainard (1997), gender inequality might be profitably exploited by foreign investors. As gender inequality in access to health and education creates a pool of low paid workers which will reduce the labor cost.

Maximized FDI could benefit the host country through technology spillovers, human capital formation support, improvement of competitive business environment, contribute to international trade integration and improvement of enterprise development (Kurtishi et al 2016). But relies heavily on wage comparative advantage through discrimination of gender in order to reap the FDI benefit comes with its own caution. Not only it will cause the global community loses out on skills, ideas and perspectives that are critical for addressing global challenges and harnessing new opportunities, a recent study by IMF concluded that gender

inequality will create an average income loss of 17.5% in the long run for developing countries and 14% for OECD countries. The current level of discrimination is estimated to induce a loss of up to US\$ 12 trillion or 16% of global income. Against this background, this paper intent to shed some light in the influence of gender inequality on FDI inflows of ASEAN countries

FDI plays a vital role in the formation of supply chains and production networks for ASEAN. Because of that, ASEAN countries governments' have committed to accelerate infrastructure investment which provides great growth potential for the region. ASEAN with a population of more than 600 million people and about half of which are under 30 years of age indicating a large and growing market, together with the availability of low-cost labor is an attractive destination for the foreign investor. The countries comprising the ASEAN have continued to attract a significant amount of FDI inflows, with accounting for more than 18% of total FDI inflows to the Asia Pacific Region.

However, according to the United Nations, throughout 2011-2014 Although the Asia - Pacific region remains attractive to investors, who accounts for 37% – 40% of total global FDI, it has not reached the level of high growth since 2008. Specifically, in ASEAN, region where its FDI account for 8% share of global FDI inward stock, the growth was volatile in 2010 and has been declining since 2012 onwards. While the gender equality in this region keep progressing and has surpassed the global average gender equality score as shown in figure 1. This raises a question whether improvement in gender equality affects FDI inflow.

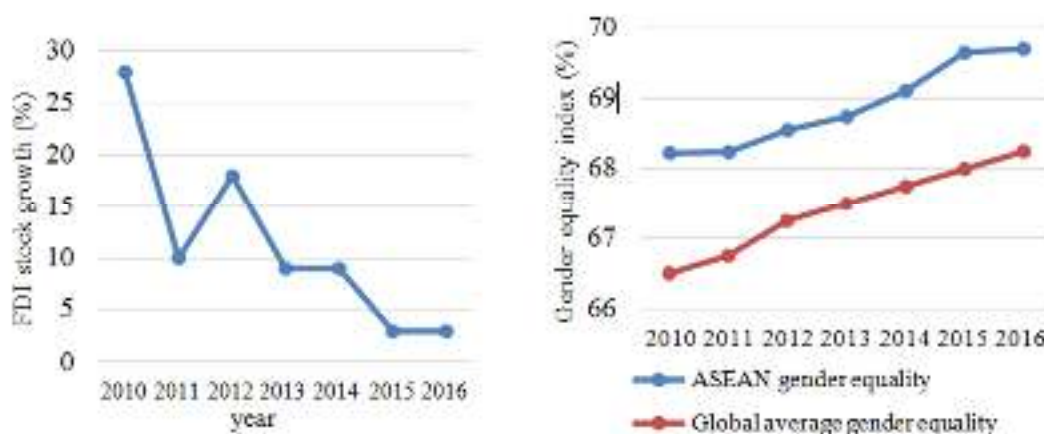


Figure 2. ASEAN FDI growth and ASEAN and global Gender Equality comparison

The year of 2016 to 2017 considered as the strongest calls for gender equality as more actions regarding this issue strikes in many countries. Started with women's march in New York, USA in January. The launch of Equal Pay Coalition by United Nations and ILO, initiated by Iceland in March. The adoption of domestic violence law by Kyrgyzstan in April. The removal of legalized child marriage by Latin America in June. The abolition of marrying the victim rape law by Tunisia in July. And the most controversial yet magnifying the Me-too movement against the sexual harassment towards women and men around the globe. These actions were ignited by the realization of the society that gender inequality is still an unsolved issue that we face in day to day life despite the goals or effort made by the global institutions and each of the governments of countries itself.

Over the past ten years, the average gender gap in ASEAN has been progressing from 33% to 30%, while the world's average is 32%. Even though it's a slow movement, compared to the historical data and also the world's average, ASEAN has made its way for a progressive effort to achieve the gender equality. The most persisting issue of gender equality in ASEAN

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exist in the political participation aspect as it has the highest gap ranged from 69% to 93%. The gender gap in labor force participation is narrowest for Cambodia 10% and widest for Indonesia 41%. The average gender gap in the labor force participation rate across all ASEAN member states is 19%. In terms of wage, the gap over time in the ASEAN member states ranges from 27% to 33%.

One of the causes of low gender gap in ASEAN is the educational attainment gap which almost closing in primary and tertiary education. Despite the impressive progress, gender inequality is still a persisting issue in ASEAN and these facts cost not only women's individual well-being and life choices but also the countries' economic loss. According to McKinsey Global Institute (MGI) research has found. ASEAN countries could add US\$1.2 trillion of GDP to their economies, 30% more than would be the case without gender inequality.

Along these lines, the link between FDI and gender inequality has emerged within many topics of empirical literature but have not reach consensus yet. Findings of Matthias Buses and Christian spiel Mann shows the results regarding comparative advantage and gender inequality, implied that industrialized countries do not have a problem with gender discrimination in developing countries; they may even profit from its occurrence due to the possibly lower prices for unskilled-labor-intensive goods.

Importantly, developing countries with less gender inequality might be negatively affected, as their comparative advantage in unskilled-labor-intensive commodities may erode if other countries with a similar factor endowment rely on unskilled females in their export sector. Mai Hoai and Tung Bui (2015) confirmed these findings by revealed that FDI takes advantage of large discrimination in economic and political rights between the two genders and considers it as a tool to increase their female labor participation.

Moreover, in countries where there is higher mean of school years among women, the expectation would be that more women will be employed in higher skilled jobs and vice versa. However, the reality is contradicted to that. The female labor force participation rate in Myanmar is more or less constant at approximately 50% indicating that the high tertiary level education attainment by women does not translate into more paid employment among women. This is also true for a number of other countries including Singapore, Thailand, Indonesia, Brunei Darussalam and Viet Nam.

As opposed to that, general argument stated that healthy and well educated workers rise productivity and attract foreign investor, by means no evidence is found that countries with greater gender inequality have a comparative advantage in attracting FDI flows, and all evidence of statistical significance suggest rather the opposite (Kucera 2002).

Further research shows that the effect of gender inequality in terms of labor on FDI can be found indirectly through women's political rights on parliamentary representation. Michal Brozowski (2013) revealed that that efficiency-seeking multinational more willingly invest in countries where cheap (but not necessarily unskilled) female labor is plentiful. Higher female parliamentary representation in the source country narrows the wage gap between sexes, reduces the availability of cheaper female labor and constitutes an FDI push factor. By the same token, women's political activism in the host countries may lead to a rise in female labor compensation and thereby weaken FDI inflows. These findings confirmed by Mai Hoai and Tung Bui (2015) where FDI takes advantage of large discrimination in economic and political rights between the two genders and considers it as a tool to increase their efficiency in their research focusing on female labor participation.

According to the explanation above, the problem formulation of this research are as follows:

1. How are the dynamics of FDI inflow growth and gender equality in wage, labor participation, human development factors, political empowerment of ASEAN countries?
2. How does gender equality in those aspects affect ASEAN FDI inflow growth and the attempt to encourage FDI growth?

2. LITERATUR STUDY

FDI has been a subject of many researches. Isabel faeth (2009) reviewed nine theoretical models of foreign direct investment (FDI) to derive the relevant determinants of FDI in real world. The outcome of this research shows that Dunning's OLI framework which combined ownership, location and internalization advantages as determinants of FDI (after they were previously discussed in separate theories) proved to be a better approach of explaining FDI as linked to mnes, which were seen as firms with market power. This combination which includes market size and characteristics, factor costs, transport costs and protection and other factors, such as political regime and infrastructure quality had explanatory power when analyzed under the OLI framework. Other factors that were experimented with in empirical studies are R&D and advertising expenditure, skill and technology intensity, the existence of multiplant enterprises and firm size were important ownership advantages in a number of studies.

Research by Kucera (2001) presented as a critical evaluation of the effects of core labour standards on FDI using ordinary least squares and two-stage least squares regressions. In a survey he held to assess the FDI determinants, he found that quality of labour as fifth most important variables of FDI. There was some earlier evidence that higher female percentages of industrial employment are associated with lower manufacturing wages (Kucera, 2001). Since then, thorough study regarding gender discrimination and FDI has emerged in many literatures. An empirical study conducted by Matthias Busse and Christian Spielmann in 2003 explored the international economic effects of gender discrimination, namely the linkages of gender inequality with comparative advantage (trade) and foreign direct investment flows.

The results indicated that gender inequality is positively associated with comparative advantage in unskilled-labor- intensive goods, that is, commodities where the impact of gender bias is likely to be felt most strongly. Another similar research was assembled to examine the gender inequality in labor market and foreign direct investment utilizing a panel dataset consist of ASEAN members except Brunei with time period from 1990 to 2002. Cian McLeod as the writer used a fixed effect model to control for unobserved cross-country factors and find that labor market equality does have a positive effect on foreign direct investment. However, he fails to find a statistically significant effect after accounting for autocorrelation and heteroscedasticity

Later in 2007 Matthias Busse extend his research by scrutinize the importance of gender inequality in education as a determinant of FDI through standard gravity model. Upbringing of this topic is provoked by the fact that data on wage differences are only available for selected years and a limited number of countries. Especially the insufficient country coverage may cause seriously biased results when analyzing FDI determinants. Moreover, even if available, wage data typically refer to the manufacturing sector only.

Similar arguments apply to labor market participation rates. Again, problems of reverse causality loom large (Braunstein 2006). The insignificant results Kucera (2001) achieves when adding the proportion of female workers in industry to his list of FDI determinants may well reflect that causality between FDI and female employment shares goes both ways. Busses' finding clearly reject the view that foreign investors favor locations where education-related gender disparities may offer cost advantages⁰. Rather, he found that gender disparity discourages FDI inflows. However, the strength of this relation depends on the level of education as well as on the destination and source of FDI flows.

Michał Brzozowski (2013) argued that that women's representation in parliaments is another aspect of the gender gap that may shape foreign investors decisions. If FDI is mostly low-cost seeking oriented, however, gender inequality in health and access to education may create a pool of low-pay workers that can be profitably exploited unless the level of productivity is not seriously hindered by gender disparities. These hypotheses are verified in the framework of a standard gravity model using System Generalized Method of Moments technique. Employing the same technique, Mai Hoai and Tung Bui (2015) investigate the impact of gender inequality from developing Asia – Pacific perspective. The study finds that FDI exhibits a particular efficiency seeking behavior. FDI are drawn to hosted countries with

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narrowed health gap between man and women. But takes advantage of large discrimination in economic and political rights between the two gender and considers it as a tool to increase their efficiency. In ASEAN itself, in the period of 2010 – 2016 while the FDI inflow keep progressing, its growth shows a declining trend. For that reason, this paper analyzes the FDI inflow growth which differentiate this research from previous researches. Including the countries selected as research object and the time period.

3. RESEARCH METHODOLOGY

This research relies on the use of secondary data. Presented as panel, the data consist of time series from 2010 to 2016 with cross section of eight ASEAN countries including Brunei Darussalam, Cambodia, Indonesia, Malaysia, Philippines, Singapore, Thailand and Vietnam due to the data limitation on Lao PDR and Myanmar. The type and sources of variables used are explained as followed. The data used for this research is sourced from UNCTAD, World Bank and International Parliamentary Union

This study utilizes econometric quantitative approach by static panel for its research. To analyze the effect between each variable, the regression method used for the estimation are Common-Constant (Pooled Ordinary Least Square/PLS), Fixed Effect (Fixed Effect Model/FEM), or Random Effect (Random Effect Model/REM) continued by Chow and Hausman Test to get the best fitted model for the estimation. Data processing for this research employs Microsoft Excel 2013 and Eviews 9.0 to aim its objectives.

Adopting to the model by the study of Hoai (2015), Brzozowski (2013), and McLeod and also considering data availability and other model alternatives adopted by many other similar preliminary researches, the model specification in this study can be formulated as follows:

$$FDI_{it} = \beta_0 + \beta_1 GR_GDP_RIIL_{it} + \beta_2 INFD_{it} + \beta_3 GR_NET_TRADE_{it} + \beta_4 GR_INFRA_GCF_{it} + \beta_5 LN_ER_{it} + \beta_6 INR_{it} + \beta_7 REDU_1_2_{it} + \beta_8 REDU3_{it} + \beta_9 RLIFE_{it} + \beta_{10} RLAB_{it} + \beta_{11} RWAGE_{it} + \beta_{12} LN_WAGE_{it} + u_{it} \dots \dots (1)$$

This research uses FDI stock data as an alternative to net inflow of foreign direct investment as a percentage of GDP, because stocks are much less volatile than flows. This variable is considered as a more suitable one for empirical studies as has already been applied in previous researches (Hoai and Bui, 2015; Brozozwski, 2013; Busse and Nunnenkamp, 2007) Flows are more volatile not only due to the existence of economic shocks, but are also very dependent on individual large-scale investment decisions. The addition of inflation, exchange rate and interest rate is based on theoretical consideration and preliminary researches which also use these variables as macro-economic control variable in analyzing gender effect on FDI. McLeod uses World Government Index as a proxy for infrastructure. This research use Gross capital formation since it includes land improvements, plant, machinery and equipment purchases, the construction of roads and railways, schools, offices, hospitals, private residential dwellings as well as commercial and industrial buildings which represent broader aspect of infrastructure as it has been confirmed in many literature studying the determinant of FDI (Kariuki 2015; Shah 2014)

For the gender variables this research adapted the study by Mai Hoai and Tung Bui (2015) where they analyze the effect of gender equality consisted of secondary gap, tertiary gap, economic and political rights and health gap on FDI inflow of Asia Pacific countries. The use of primary and secondary school enrollment ratio as proxy for low skilled labour force adapted from research by Michal Brozozwski (2013) and Matthias Busse and Nunnenkamp (2007), labor participation and wage separately, gives more significant result as a proxy for economic rights and gives clearer image of the characteristics of FDI in Host country (Kucera 2002; Busse 2003).

This research aims to analyses whether gender equality could enhance the attempt to increase FDI inflows, therefore this study estimate in stepwise manner, adapting the estimation strategy by Mphigalale Tshifhiwa Victor (2011), Mai Hoai and Tung bui (2015),

Michal Brzozowski (2013) and Matthias Busse (2003) in research regarding to similar matter. The purpose of this estimation is to ascertain the robustness of any eventual relationship between the two variables, avoiding multicollinearity and overfitting.

Model 1 estimate a baseline model with only the control variables consist macroeconomic variables only, namely, GDP growth, inflation growth, infrastructure growth, trade growth and exchange rate. From model 2 to 7, it introduces respectively the six proxies of gender equality discussed in the previous section, namely primary education gap, tertiary education gap, political rights, labour participation gender ratio, wage ratio and gender health gap. Last, model 8 introduce wage in general along with the control variable to see the relation to FDI. By adapting this method, it allows us to see which gender aspect has the largest effect on FDI and the relation of macroeconomic variable, and its pure impact on fdi before it interacts with other aspect of another gender variable. The model specification in stepwise manner can be formulated as follows

1. Model 1, baseline regression model, estimating the effect of macroeconomic variable as control variable on FDI inflow

$$FDI_{it} = \beta_0 + \beta_1 GR_GDP_RIIL_{it} + \beta_2 INFD_{it} + \beta_3 GR_NET_TRADE_{it} + \beta_4 GR_INFRA_GCF_{it} + \beta_5 LN_ER_{it} + \beta_6 INR_{it} + uit \dots\dots\dots (2)$$

2. Model 2, estimates the effect of macroeconomic variable on FDI inflow, by including wage variable

$$FDI_{it} = \beta_0 + \beta_1 GR_GDP_RIIL_{it} + \beta_2 INFD_{it} + \beta_3 GR_NET_TRADE_{it} + \beta_4 GR_INFRA_GCF_{it} + \beta_5 LN_ER_{it} + \beta_6 INR_{it} + \beta_7 WAGE_LN + uit \dots\dots\dots (3)$$

3. Model 3, estimates the effect of macroeconomic variable on FDI inflow, by including gender variable proxies as female to male ratio of primary school enrolment

$$FDI_{it} = \beta_0 + \beta_1 GR_GDP_RIIL_{it} + \beta_2 INFD_{it} + \beta_3 GR_NET_TRADE_{it} + \beta_4 GR_INFRA_GCF_{it} + \beta_5 LN_ER_{it} + \beta_6 INR_{it} + \beta_7 REDU_1_2_{it} + uit \dots\dots\dots (4)$$

4. Model 4, estimates the effect of macroeconomic variable on FDI inflow, by including gender variable proxies as female to male ratio of primary school enrolment

$$FDI_{it} = \beta_0 + \beta_1 GR_GDP_RIIL_{it} + \beta_2 INFD_{it} + \beta_3 GR_NET_TRADE_{it} + \beta_4 GR_INFRA_GCF_{it} + \beta_5 LN_ER_{it} + \beta_6 INR_{it} + \beta_7 REDU_3_{it} + uit \dots\dots\dots (5)$$

5. Model 5, estimates the effect of macroeconomic variable on FDI inflow, by including gender variable proxy as female to male ratio of life expectancy

$$FDI_{it} = \beta_0 + \beta_1 GR_GDP_RIIL_{it} + \beta_2 INFD_{it} + \beta_3 GR_NET_TRADE_{it} + \beta_4 GR_INFRA_GCF_{it} + \beta_5 LN_ER_{it} + \beta_6 INR_{it} + \beta_7 RLIFE_{it} + uit \dots\dots\dots (6)$$

6. Model 6, estimates the effect of macroeconomic variable on FDI inflow, by including gender variable proxies as female to male ratio of labor participation

$$FDI_{it} = \beta_0 + \beta_1 GR_GDP_RIIL_{it} + \beta_2 INFD_{it} + \beta_3 GR_NET_TRADE_{it} + \beta_4 GR_INFRA_GCF_{it} + \beta_5 LN_ER_{it} + \beta_6 INR_{it} + \beta_7 RLAB + uit \dots\dots\dots (7)$$

7. Model 7, estimates the effect of macroeconomic variable on FDI inflow, by including gender variable proxies as female to male ratio of political rights

$$FDI_{it} = \beta_0 + \beta_1 GR_GDP_RIIL_{it} + \beta_2 INFD_{it} + \beta_3 GR_NET_TRADE_{it} + \beta_4 GR_INFRA_GCF_{it} + \beta_5 LN_ER_{it} + \beta_6 INR_{it} + \beta_7 RPOL + uit \dots\dots\dots (8)$$

8. Model 8, estimates the effect of macroeconomic variable on FDI inflow by including gender variable proxies as female to male ratio of wage

$$FDI_{it} = \beta_0 + \beta_1 GR_GDP_RIIL_{it} + \beta_2 INFD_{it} + \beta_3 GR_NET_TRADE_{it} + \beta_4 GR_INFRA_GCF_{it} + \beta_5 LN_ER_{it} + \beta_6 INR_{it} + \beta_7 RWAGE_{it} + uit \dots\dots\dots (9)$$

4. RESULT AND DISCUSSION

Dynamics of FDI on ASEAN Countries

The growth of FDI inflow vary between each countries of ASEAN with a declining trend overall. In 2010, the FDI stock in this region doubled from 14% in 2009 to 28%, 2010 by generating a record high of 1.127 billion US\$ inward stock and 75.8 billion US\$ inflows.

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Intra-ASEAN flows also exceeded the 10 billion US\$ mark for the first time (12.1 billion US\$) since the Asian financial crisis in 1997. Most of this increase are sourced from equity investment and reinvested earnings which has been key drivers of FDI growth in ASEAN. Another factor that boosted FDI growth in the region last year is the increasing trend toward mergers and acquisitions (M&A).

In 2010, cross-border inward M&A purchases in ASEAN increased by more than 200% to US\$14 billion, while M&A sales declined by 21% to US\$10 billion. Singapore is the largest market for this investment although the highest growth in 2010 is achieved by Indonesia. Its inflows in 2010 alone amount to four times its average inflows (2.6 billion US\$) in more than a decade and exceed the US\$10 billion mark for the first time (13.3 billion US\$). It also achieved the second largest FDI stock after Singapore. Much of this increase came from equity investment and reinvested earnings, facilitated perhaps by small investment projects with quick profits rather than the traditional infrastructure projects with long gestation period for returns.

The FDI stock growth of this region start to decelerated in 2011 by the rate of 10%. Sharp decline in Cambodia by -51% is one of the contributing factor to this deceleration of ASEAN FDI stock. The world economic crisis put, US and EU, Cambodian main garment importers, in a deep recession. In addition, the Cambodian economy has been virtually fully dollarized since 1995 (Zamaroczy & Sa, 2002). Under the policy of Quantitative Easing of the U.S., the financial stability of the Cambodian Riel was thrown into question. Furthermore, the border conflict over Preah Vihear Temple degraded the situation as Cambodia and Thailand had skirmishes and closed border.

Furthermore, the sovereign debt crisis EU creates spillover effect on the inflow FDI of this region, even with the limited exposure by the European Banks in ASEAN. The underlying reason are first, US and EU account for 20% of the ASEAN total trade, therefore any deterioration in these country will definitely impact ASEAN, since according to IMF, a further deterioration in the EU sovereign crisis will cut world GDP growth by 0.4%. Second, the resulting de-leveraging by European banks is likely to impact on the fund market including financial flow to emerging market like ASEAN. Especially in FDI, the EU accounts for the largest source of inflows into ASEAN. Therefore, any intensification of the debt crisis will have significant global repercussions (IMF 2011)

FDI regained its strength and recovered slowly from 18% becomes 10% in 2011 to the 8% increase become 18% in 2012. The world economy, especially the US and EU, was getting better. Consequently, the Cambodian inflow of FDI surged up sharply at 207% with the leading investors consist of China, Korea, Malaysia, UK and USA, focusing on Industry (mainly garment and textile) 70.14%, agriculture 13.9%, Services 6% and Tourism 9.9%. (Loem Senghuo, 2015). Another key contributory factor to increasing FDI flows is the competitive advantage of the region in terms of the supply of low cost skilled and unskilled labour which has also become the main reason of investment by Chinese companies while there was an increasing cost pressures in China. Therefore, Chinese textiles and garments manufacturers in the Pearl River Delta has relocated to ASEAN.

FDI stock growth falls by 9% in 2013. this occurrence is contributed strongly by the fact the declined regional economic growth from 5.8%. However, the improved policy environment, strong macroeconomic fundamentals, regional market prospects and growing positive investor sentiment has made FDI in 2013 continued to surge and are about on par with those to China for the first time since 1993. Inflows in 2013 exceeded \$122 billion – pushing the region's rapidly rising inward FDI stock to \$1.6 trillion Intra-ASEAN investment contributed about 17% to the total inflows in the region and is a major source of investment in most ASEAN Member States. In 2013, some 88% of the 99,434 tariff lines in ASEAN were at a rate of 0% for intra-ASEAN imports.

By, the year of 2014 FDI continue to grow constantly at 9%, driven by a 26% increase in intra-regional investment and strong FDI inflows from a majority of dialogue Partners particular, FDI flows from the United States rose by 165%, followed by increases from Australia (63%), the European Union (EU) (31%), the Republic of Korea (22%) and China

(31%). Investment from Hong Kong (China) rose by 82%, to \$9.5 billion. Intra- ASEAN investment rose from \$19.4 billion in 2013 to \$24.4 billion in 2014, accounting for 18% of total inflows into the region. This upward intraregional trend suggests a growing interest of ASEAN companies in establishing a stronger regional presence, particularly in recent years, in light of emerging opportunities and AEC-2015 influences.

FDI stock growth declined by 6% to the region, from \$130 billion in 2014 to \$120 billion 2015. The performances of ASEAN Member States were uneven. The significant decline in FDI was particularly visible in services, intracompany loans and cross-border M&A activities. The intracompany loans component of FDI finance in the region declined significantly, from 14 per cent in 2014 to only 1 per cent in 2015, which contributed to the \$10 billion decline in FDI flows, due to significant outflows of loans by MNEs or affiliates based in Singapore and Thailand. Flows to the services industries declined by 21 per cent, to \$79 billion – dragged down by a fall in FDI in finance. Investments in the primary industries were flat, at the same level as in 2014 (\$12 billion). There were some positive developments: FDI in manufacturing rose significantly, Expansionary investment activities continued to grow, the use of equity capital for FDI activities rose to an all-time high, and intraregional investment remained strong. Nevertheless, these positive developments were insufficient to compensate for the overall decline, led primarily by services.

FDI flows in ASEAN remained constant at a high level in 2016 despite a decline to \$96.7 billion. Flows to the region fell by 20 per cent, reflecting the general decline in global FDI flows and in flows to developing economies. A significant fall in FDI in two Member States, caused by one off factors, dragged down inflows in the region. Flows from most ASEAN Dialogue Partners rose, but a single significant divestment, acquisitions of foreign assets by ASEAN companies in their home countries and large repayments of intracompany loans in one Member State contributed to the decline. Cross-border M&A sales in ASEAN fell by 25 per cent, from \$10.3 billion in 2015 to \$7.7 billion in 2016, which also contributed to the fall in FDI inflows. Inflows from a number of major source countries rose, but not enough to overcome the decline.

There has been shifting in the major economic sector of FDI inflow. In its first 25 years, FDI inflow to the region has dominated by manufacturing sector, afterwards, there has been a shift in this sector and a progressive rise in services FDI into the region over the last two decades (ASEAN Investment report 2017). in the beginning of 20th century, manufacturing sectors still holds more than 30% of the total FDI inflow to the region. By the latest of 2016, it only holds 17% share of total FDI while service sectors dominate the fdi inflow with 70% share of the total FDI inflow. These shifts are the result of the changing structure of the world economy, as well as the composition of global FDI: as economies industrialize, the structure of GDP moves more towards the production and consumption of services (UNCTAD 2004).

The inflow of FDI also exhibit a locational pattern. Indonesia, Vietnam, Malaysia, Thailand were the largest recipients of manufacturing FDI since they are a populous economy with strong industrial bases and well trained workforces. In the primary sector, Brunei Darussalam, Cambodia, Indonesia, Malaysia and Myanmar were the main recipient States because of their large agriculture sectors and their mineral oil and gas resources. On the other side, Services FDI to ASEAN is dominated by Singapore – in 2016 this Member State received nearly 90 per cent of all services FDI into the region. Moreover, as FDI in financial services accounts for two thirds of services investment in Singapore (including regional headquarters and holding companies), this one industry has a huge bearing on trends in the region

Apart from financial services FDI in infrastructural services was widespread during 2012–2016, and especially high as a share of total services FDI in Cambodia, Lao, Myanmar and Vietnam (CLMV) Member States as well as Indonesia and Malaysia. FDI in closely connected industries such as construction and real estate was also proportionally high in some Member States over the same period, including in populous ones such as the Philippines, Thailand and Viet Nam. FDI in trade is also widespread. FDI in accommodation and food

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services is significant in CLMV members, such as Cambodia, Myanmar and Viet Nam, not only because of rising tourism but also, as importantly, growing business travel.

The European Union (EU) is the largest source of investment in the region. According to ASEAN Investment Report(AIR), Some EU Multinational enterprises (MNEs), such as Shell (Netherlands) and HSBC (United Kingdom), have been operating in the region since the 1800s. Presently, EU companies, such as Total (France), British American Tobacco (United Kingdom), Siemens (Germany), BP (United Kingdom) and Unilever (Netherlands and United Kingdom), operate in multiple ASEAN Member States and are involved in different types of activities.

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Traditionally, EU FDI in ASEAN has been driven by resource-and efficiency- seeking motives. Increasingly, it is also driven by market-seeking motives and strategic asset- seeking motives, reflecting the opportunities associated with the region's growing market, rapid economic growth and regional integration. The sectoral distribution of EU FDI in ASEAN in 2005–2010 and 2011–2016 differs significantly. In the earlier period, manufacturing investment dominated. In the more recent period, EU FDI in manufacturing has declined, while investment into finance and other services (in particular in wholesale and retail trade) increased substantially, along with renewed interest in mining activities.

The second largest contributor host country of FDI ASEAN is United States which accounted for about 11 percent of cumulative FDI flows into ASEAN from 2010 to 2015, and United States MNEs are actively involved in sourcing arrangements, including contract manufacturing, in the region. On a global level, about 4.6 per cent of United States FDI worldwide is in ASEAN. The 72 percent of United States FDI in ASEAN is in the services sector. Manufacturing accounts for 20 per cent, and mining for the remainder.

Japan placed third as the largest contributor of ASEAN FDI inflow which operate in mostly, automotive parts and components, and electronics industries. A majority of these Japanese MNEs provide services or produce parts for larger MNEs, either as suppliers or contract manufacturers. They play an important role in the linkages between them and the foreign and local MSMEs in the region. They help strengthen the regional production networks of many large MNEs, especially in the automotive and electronics industry in ASEAN.

The majority of large MNEs present in ASEAN possess a long history in the region and are market-oriented, such as Unilever (United Kingdom–Netherlands, food and beverages), Nissan (Japan, motor vehicles), General Electric (United States, industrial and commercial machinery), Royal Dutch Shell (United Kingdom–Netherlands, oil and gas) and Mitsui & Co. (Japan, general trading company). Other MNEs, large and small, such as Seagate (United States) and Quanta Computers (Taiwan), have a more focused presence in ASEAN because they are using the region as a competitive location to supply global markets as part of their global value chains (GVCs).

Dynamics of Gender Equality on ASEAN Countries

Gender equality in ASEAN countries keep improving over time including for each country. The highest gender equality gained by Philippine with the score of 78% overall and included as top 10 country with high gender equality. The lowest score held by Cambodia by the score of 65% overall in 2016 and lower than the global average.

The average of gender equality for primary and secondary school enrollment of ASEAN region ranges between 98% to 99% with an increasing trend. However, the gap is not fully closed yet. According to UNICEF, Gender disparity in education is a prevalent issue that is

linked to pervasive socio-cultural gender biases in the region. Traditionally, a boy's education has been seen as an investment, increasing the earnings and social status of the family and different standards apply for girls. The latest data explained that in ASEAN average, 1% of the girl's population in ASEAN don't get the education they deserve due to the existence of gender bias. Cambodia has the lowest country average with the score of 92% while Malaysia and Singapore holds the first position. The low ratio of Cambodia gender equality in primary education happened due to the fact that even though access to primary education have improved, traditional challenges and emerging issues still holds back Cambodia to achieves gender equality

On the other hand, gender equality in tertiary education tells a different story. The gap is closing and keeps going down each year. Except for Vietnam, the number of female school enrolment in tertiary education exceed the male with the highest ratio held by Indonesia. In ASEAN countries, this is in line as explained by united nations that though greater financial capacity in the family had a significantly positive effect on attendance for both genders, it affected girls' education rates almost twice as much as that of boys. As the highest level of education, only families with medium high income, with the exception of scholarship are able to enrolled their kids. Therefore, there is no social and economic constraints for both gender to enroll in tertiary education.

Gender equality in labor participation also shows an increasing trend despite the slow progress. The ration in this region ranges between 74% to 77%. In other words, there is a remaining gap of approximately 30% in labour force market between each gender despite the losing gap of education attainment both in primary and tertiary level.

However, from the sectoral perspectives the labor participation ration shows a similar pattern as the educational attainment. Services sectors as the sector which requires high skill and education has the highest ratio amongst other sectors with data ranges from 126% to 130%. In other words, the number of female workers exceeds the number works just as the number of female student exceeds the number of male student in tertiary education level. Industry sector has the lowest labour participation ratio due to the nature of its work which is brawn intensive instead of brain intensive as service sector does (Brzozowski 2013).

Life expectancy ratio gained by respectively, Vietnam, Thailand, and Philippines. however, there is a declining trend from 2010 to 2016. This is due to the shifting of lifestyle of the population in this region. This can be explained by research in many countries such as United States, Denmark, Finland, Norway, Sweden. during 1970–1989 demonstrated that on average, 2.4 years or more than 40% of the total sex difference in life expectancy in 1970–1974 was estimated to be attributable to smoking in these countries. Since 1980 in the United States, men's rates of lung cancer mortality, although still increasing, have slowed down in pace; in contrast, women's rates of lung cancer mortality have skyrocketed. This trend reflects, in large part, the later adoption of smoking by women.

Political participation in this region remains low from time to time although there was some significant increase in certain countries. Countries with highest political participation are Philippines, Singapore, and Cambodia. While the lowest are Malaysia and Thailand. The condition of sociocultural of the nation which is concentrated with patriarchal culture is one of the obstacles to the actualization of women as the nation's policy- makers. The patriarchal culture illustrates the high dominance of men who do not give women a chance to pass. This culture considers women weak and positions women more as housewives. With these conditions, the financial capacity of women is also limited (Inwantoro, 2014)

Wage equality fluctuates from time to time, lies in the range of 0.63 to 0.80 country with highest wage equality are Brunei and Cambodia while the lowest are Malaysia, Singapore and Thailand. Taken together, these numbers may imply that women as a whole earn less than men. Latest, in 2016 the gender wage gap is widening. Where women only earn 67% of what men earns for the similar works. This is related to the occupation segregation issue persisting in ASEAN where women are crowded into a particular work field, in ASEAN case, the service sector. Leading to larger supply relative to demand, therefore decreasing the marginal product and finally the wage of female workers.

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The Impact of Gender Equality on FDI

For model 1 according to table 2. variable that has significant effect of FDI inflow growth are Real GDP growth, Infrastructure Growth, inflation, interest rate and exchange rate. Real GDP growth has significant positive effect on FDI. This is in line with market size hypothesis which stated that a large market is necessary for efficient utilization of resources and exploitation of economies. GDP growth also show the largest coefficient among others, meaning FDI inflow of ASEAN has the tendency of market seeking behavior. This is also confirmed by reality captured by ASEAN Investment Report stating that m manufacturing and services FDI in South-East Asia, and in the rest of the developing world, focused primarily on local markets, as part of MNEs' domestic strategies (i.e. Market-seeking FDI).

Table 2 Estimation Result

Variables	Model							
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
GR_GDP	0.341	0.640	0.705	0.348	0.673	0.268	0.347	0.218
_RIIL	(0.00)	(0.00)	(0.00)	(0.03)	0.000	(0.06)	(0.00)	(0.33)
GR_INFRA	0.197	0.200	0.185	0.245	0.235	0.153	0.113	0.251
_GCF	(0.015)	(0.00)	(0.00)	(0.00)	0.000	(0.08)	(0.23)	(0.00)
GR_NET	-0.018	0.012	-0.008	-0.010	-0.005	-0.018	-0.018	-0.022
_TRADE	(0.142)	(0.39)	(0.25)	(0.39)	(0.26)	(0.09)	(0.16)	(0.06)
INFD	-2.240	-1.969	-2.055	-2.624	-1.759	-2.195	-2.086	-1.756
	(0.029)	(0.02)	(0.01)	(0.00)	(0.01)	(0.02)	(0.00)	(0.10)
INRR	-0.021	-0.013	-0.012	-0.023	-0.009	-0.022	-0.036	-0.018
	(0.042)	(0.12)	(0.11)	(0.00)	(0.16)	(0.02)	(0.01)	(0.11)
ER_LN	0.388	0.044	0.011	-0.336	0.013	-0.433	-0.315	-0.426
	(0.014)	0.5920)	(0.01)	(0.02)	(0.01)	(0.00)	(0.04)	(0.02)
LN_WAGE		-0.023						
		(0.01)						
REDU			-0.940					
_1_2			(0.12)					
REDU_3				0.059				
				(0.00)				
RLAB					0.142			
					(0.06)			
RLIFE						0.605		
						(0.343)		
POL							0.077	
							(0.72)	
WAGE								-0.055
								(0.80)
C	2.043	0.221	1.052	1.653	-0.022	1.670	1.912	2.278
	0.006	0.012	0.104	0.011	0.677	0.036	0.027	0.004

Infrastructure can reduce the investor's cost as it is essential for the smooth functioning of multinational's affiliate production and trade activities (Shah, 2014). Net trade affect FDI negatively insignificant. This is in accordance with the trade balance and foreign capital theory where the decrease of export or trade deficit leads to capital inflow from foreign country. This finding also in line with research by Gareth Gray (2014) whom found out that the expected sign is dependent on whether the foreign investors is planning to export that product it produces in the host country to neighboring countries, or whether it plans to only serve that host country's market.

Infrastructure growth also has significant positive effect on FDI, because a good Theory suggests export- orientated FDI is positively influenced by how open that host country is, while non-export orientated investments are negatively affected by increased trade openness. Most services FDI is likely to be of a horizontal nature (non- export), aimed at the host country market in which the investment is made, rather than vertical (intended

for export back to the home market). Therefore, the trade openness could in ASEAN countries has negative relations since it is shown in the composition of FDI inflow itself which dominated by service sectors. Although, estimation result shows insignificant result since, it is often difficult to export a service. Sometimes the service rendered offers an intangible benefit. As a result, it has little to do with trade flows per se and the effect becomes insignificant (Gray 2014)

Real exchange rate also has negative yet significant effect on FDI inflow. Meaning, appreciation in the local currency of host country increases the FDI inflow. Similar finding by analyzing the same region, showing that if the FDI's objective is to serve the host country market, then the FDI and trade are substitutes; which means, the appreciation of the host currency attracts the FDI inflows due to higher purchasing power of the domestic consumers. Inflation rates have the same effect as exchange rate in accordance with the fisher theory. Moreover, low inflation is a sign of a good program that helps to attain higher growth in the short run. For that reason, maintaining low and stable price level is a good way to attract more FDI (Hoai 2013).

Interest rate shows a negative and significant effect on FDI inflows. The similar result found by Siddiqui, et al (2014) in studying interest rate as FDI determinant in ASEAN 5 countries. When inflation rate is low, nominal interest rate declines and as a result cost of capital is low. Furthermore, the availability of capital at cheap lending rate would enable foreign investors not only to locate better partners in the host countries with sufficient domestic investment to supplement but would also maximize the return on their investment. This supported findings by whom elaborates interest rate theory with investment according to Keynes which can be seen from the Marginal Efficiency of Investment (MEI) and Marginal Efficiency of Capital (MEC). MEI describes the investment relationship that has been made by an entrepreneur within a certain period. Meanwhile MEC emphasizes more on the relationship between expected results from the capital invested by an entrepreneur. The relationship is made for businesses that have a higher rate of return than the prevailing interest rate. Thus an increase in interest rates will hamper investment growth, and vice versa, the increase in investment is driven by a decline in interest rates.

Model 2 The effect of macro-economic variables in addition with wage on FDI Inflow Growth

Model 2 shows monthly minimum wage has negative and significant effect on fdi inflow growth. Meaning a one percent increase of wage will decrease fdi inflow by 0.023 percent. This shows not only market seeking FDI in ASEAN also have efficiency seeking in its nature. An increase in labor wage will decrease rate of return therefore discourages FDI. ASEAN also proved to have low wages as its comparative advantage. This study confirmed that wage become a significant determining factor of great inflow of FDI in ASEAN countries. When including this variables, there are a significant difference on the effect of gdp growth on fdi. Real gdp growth effect magnitude is increased twice compared model without wage variables from 0.3 to 0.6. Exchange rate and net trade also has change of direction in affecting fdi. Exchange rates and net trade affect fdi positively and significant. However, the result is not significant for net trade.

Model 3 The effect of macro-economic variables in addition with primary and secondary education ratio on FDI Inflow Growth

Model 3 shows primary and education ratio has negative insignificant effect on fdi inflow. This variable is a proxy the availability of skilled and educated labor growth. The negative signs show that the majority of work fields for low skilled workers are brawn intensive (Brzozowski, 2013). The labour demand for this work fields relies heavily on male workers compared to female as the data shows male labour force dominated the agricultural and industry work sectors, this fact justifies the occupational crowding model by Barbara Bergmann. However, for ASEAN region this variable is in significant in affecting the FDI

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inflow. The inclusion of this variables caused significant increase on explanatory power of real gdp growth. There is also a change of direction of exchange rate effect on fdi.

Model 4 The effect of macro-economic variables in addition with tertiary education ratio on FDI Inflow Growth

This model shows tertiary education ratio has positive significant effect on fdi inflow growth. Tertiary education is used as a proxy for the availability high-skilled labor force as the tertiary level is associated with some vocational training in certain countries (Brozowski 2013). A positive and significant result shows that FDI inflow of ASEAN countries are not only market seeking but also efficiency seeking. High skill labor has a greater productivity and in turn higher output. This result can also cause by the characteristics of labour demand in the market as the data shows that fdi in ASEAN flows majorly to service sectors which requires high skilled or educated labour. Moreover, the service sectors of this region is dominated by female workers which can be explained by the occupational segregation theory. The inclusion of this variable doesn't caused any significant change in the explanatory power and direction of macro-economic variables effect on FDI

Model 5 The effect of macro-economic variables in addition with labor participation ratio on FDI Inflow Growth

Model 5 shows with labor participation ratio has positive significant effect on fdi inflow growth. With ASEAN receiving a high level of FDI in female intensive sectors such as services, the gender equality and increase of female labor participation rates plays a prominent role in attracting FDI in the region. The inclusion of this variables caused significant change in the explanatory power of real gdp growth and. the direction and explanatory power of exchange rate effect on fdi is also differentiates.

Model 6. The effect of macro-economic variables in addition with life expectancy ratio on FDI Inflow Growth

Model 6 shows life expectancy ratio has positive insignificant effect on fdi inflow growth. This ratio is chosen to show the health gap between male and female. This result is in line with the study by Mai Hoai and Thung Bui in 2015 in studying fdi and gender in Asia pacific. By employing a labor force with good health, both vertical and horizontal FDI firms can maximize their productivity. Better health virtue would reduce the probability of absenteeism. Therefore, life expectancy has positive effect in attracting fdi however the result is insignificant for this region. The inclusion of this variables doesn't cause significant changes in explanatory power and direction of the variables.

Model 7. The effect of macro-economic variables in addition with political participation ratio on FDI Inflow Growth

Model 7 shows political participation ratio has positive insignificant effect on fdi inflow growth. The finding of this research is in contrast with Mai Hoai and Tung Bui in 2015 which shows negative effect of the variable on FDI. The argued that an increased women's representation effect policy output which may trigger greater interest in issues of equality, importantly in sex discrimination in the labor market. As mentioned earlier in the relations of gender on FDI (Figure 13), a rise in worker rights might discourages FDI inflows since it will increase the labour cost. However, the effect of the variables in ASEAN country shows a different story. Political and macroeconomic stability, as well as respect for political rights between gender in the host countries are regarded as preconditions for a successful promotion of a country as an FDI-friendly economy. Moreover, an increase in this aspect will trigger the awareness of gender inequality issue and increase female rights not only in labor market but in human capital development aspect such as education and health. An increase in these aspect will in turn increase the FDI. However, the estimation doesn't show a significant result for this region. This might be caused by the probability that increased women's representation has little effect on policy output for

gender equality. The inclusion of this variables doesn't cause significant changes in explanatory power and direction of the variables

Model 8. The effect of macro-economic variables in addition with wage ratio on FDI Inflow Growth

Model 8 shows wage ratio has negative insignificant effect on fdi inflow growth. This result is in line with the previous researches stated that low labor cost is a competitive advantage in attracting FDI as its tend to flow in countries where inequality gap is large (Kucera 2002; McLeod 2002; Busse 2003). As explained by the occupational crowding model, women are often seen as a secondary force in the labor market because of their ability to give birth. Furthermore, certain industries are characterized by gender fragmentation where female labor force is overcrowded. As a consequence, average wage is lowered to cope with increasing unemployment. The more discrimination there is, the more competitive the labor market gets as firms can lower their wage cost (Hoai and Bui 2015). However, the effect of this variables is not significant this may be caused by the probability that the benefits of low compensation costs may be completely outweighed by low productivity of less educated workers. Both arguments are relevant for the cost-oriented or vertical FDI.

6. CONCLUSION

FDI inflow growth of ASEAN countries has volatile dynamics with declining trend. Characteristics of ASEAN countries are mostly market seeking and efficiency seeking. It is market seeking due to the fact that variable which has the strongest effect based on the estimation is economic size which represented by GDP growth. Efficiency seeking due to the significant effect of wage on FDI inflows. FDI flows majorly to service sectors which dominated by female labour force and requires high skilled or educated workers. The ratio of tertiary education is high and has positive and significant effect on FDI that's how FDI is also resource seeking.

Gender equality in ASEAN is relatively high compared to the world's average. However, the gender gap in this region still exist. With the highest inequality lies on political participation, followed by respectively from the lowest are wage ratio, labor participation, primary and secondary school enrollment, life expectancy and tertiary education. With overall country has the highest rate of equality is Philippine and Cambodia the lowest. Based on the estimation result, macro-economic variable with significant effect towards FDI are GDP growth, infrastructure growth positively and inflation, interest rate and exchange rate negatively.

Gender variable that has significant effect are tertiary education and labor participation both affect FDI positively. Specifically, for gender equality in labor participation rate is able to enhance the effort of attracting FDI as it increases the explanatory variables of GDP growth significantly. Gender wage ratio affect FDI negatively and insignificant. This does not rule out that foreign investors aim at reducing wage costs for similarly qualified labor since the estimation result shows overall wage affect in the same direction significantly.

As a developing country which its economic also supported strongly by foreign investment, not only the amount of flow but the growth of flow itself should also take into consideration. In order to boost its FDI inflow amount and also its growth their governments must be fully aware of the extent of structural changes in the characteristics of FDI. FDI is shifting towards knowledge- and skill-intensive manufacturing – as well as services. The competitive advantage of low labour costs may become less relevant as a locational determinant of export-oriented FDI. Given minimum levels of skills and infrastructure, low labour costs may still matter, but only in a handful of low technology activities. Therefore, government should not rely heavily on low labour cost in order to attract FDI especially through the disparity of gender, since it will fail to induce higher value-added FDI and will suffer slower economic growth.

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Instead, ASEAN countries should focus on determinants which strongly affected FDI without sacrificing its development of human capital. Human capital has been one of the most essential factors for long term growth and competitiveness. To build future economies that are both dynamic and inclusive, everyone must have equal opportunity. Therefore, the effort to boost FDI growth by also enhance gender equality should not only be seen as an option but rather a purpose. Specifically, in the aspect female labor force participation rate and its skill or education of the labor. Female participation rate is still low compared to men.

It is thus crucial especially in a context of increasing competition for FDI that developing countries formulate policies that can raise the level of labour participation rate by creating supportive environment for both gender to be actively participate in the labor market and having a low turnover rates for women as the job level is higher. It is also vital for ASEAN to maintain its rate of tertiary school enrolment ration to increase build up the level of education and skill of the human resources as it is necessary to raise not only the volume but also the quality and sophistication of the FDI that a country could attract. Again, this has to be accompanied by the effort to keep supportive environment for female especially mothers to stay at the labor force market or else the high rate of high educated female wouldn't be able to enhance the effort of attracting FDI. Specifically, for country such as Indonesia, one of the underlying factor of for female to leave labor force market is the decision to take care of the family. It is difficult to have it both ways for female worker in Indonesia due to the flexibility of labor force regulation. Although the concept is still not familiar, paternity leave is already being applied in Indonesia for one-month duration. However, while paternity pay in other country such as United Kingdom is 90% of the weekly earning, in Indonesia its only 50% therefore most people choose not to take it. It is necessary for government to create a better policy regarding this aspect since paternity leaves is important to share the burden for families. It can promote parent-child bonding, improve outcomes for children, and even increase gender equity at home and at the workplace. Increasing paid leave, and innovative strategies to break down cultural barriers, can have a big impact on how much paternity leave male workers take. The government should also ensure that lower income, more vulnerable women have access to rewarding work opportunities.

Empirical analyses should always end with a word of caution. And limitations. This scope of this study limited to only eight countries of ASEAN excluding Lao PDR and Myanmar due to data limitation. Also the macroeconomic variables and gender equality variable is still not adequate enough to describe the determining factors of FDI. Moreover, the result of this research are still on aggregate level. Therefore, it is recommended to do a research in more disaggregated analysis, such as sectoral level, also use a different approach on the method of study, may yield important insights.

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