

Foreign Direct Investment and Income Inequality in ASEAN - 5 การลงทุนโดยตรงจากต่างประเทศและความเหลื่อมล้ำทางรายได้ในกลุ่มประเทศก่อตั้งอาเซียน

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Abstract

This analysis of the impacts of the governance in focusing Foreign Direct Investment (FDI) attention associated with income inequality on the spatial and temporal dynamics in ASEAN - 5 were conducted under Fixed Effect Model (FEM) and Random Effect Model (REM) using the balanced panel data analysis over the period of 2002 - 2018. One of the main findings indicated that ASEAN - 5 countries with different economic conditions tended to have different effects of FDI on income distribution, and contributed to increasing in income inequality. In addition, GDP per capita, Trade openness, Gross Capital Formation, and Governance which are important indicators for economic growth and development would not reduce inequality, rather they led to an income disparity. The findings revealed that the dispersion of income can be mitigated by increasing FDI productivities which might optimize these countries' potential in the good governance. We concluded that ASEAN - 5 countries could achieve better economic growth and development with higher quality of governance. The adoption of national and regional policies should be balanced with FDI - related measures and good governance to create better sustainable economic development and to ensure more equitable distribution of income.

Keywords: Balanced Panel Data Analysis, Foreign Direct Investment, Gini Index, Governance

บทคัดย่อ

การศึกษานี้มีวัตถุประสงค์เพื่อวิเคราะห์ปัจจัยที่มีผลกระทบต่อความเหลื่อมล้ำของรายได้ในกลุ่มประเทศผู้ก่อตั้งอาเซียน ในลักษณะพลวัตเชิงพื้นที่ตั้งแต่ ค.ศ. 2002 - 2018 ใช้การวิเคราะห์ข้อมูลพาแนลแบบสมดุล (Balanced Panel Data Analysis) ด้วยวิธีในรูปของอิทธิพลคงที่ (Fixed Effect Model) และอิทธิพลสุ่ม (Random Effect Model) โดยนำตัวแปรทางเศรษฐกิจมาศึกษาในแบบจำลอง ได้แก่ สัมประสิทธิ์จีนิ การลงทุนโดยตรงจากต่างประเทศ ผลิตภัณฑ์มวลรวมประชาชาติต่อประชากร ระดับการเปิดประเทศ การลงทุนรวม และธรรมาภิบาล ผลการศึกษาพบว่า การลงทุนโดยตรงจากต่างประเทศ ระดับการเปิดประเทศ การลงทุนรวม และระดับธรรมาภิบาล มีผลต่อการทวิความเหลื่อมล้ำต่อการกระจายรายได้ในภูมิภาคกลุ่มประเทศก่อตั้งอาเซียนซึ่งมีความหลากหลายในเชิงเศรษฐกิจ แต่ผลิตภัณฑ์มวลรวมประชาชาติต่อประชากรและอิทธิพลร่วมของการลงทุนโดยตรงจากต่างประเทศตามระดับธรรมาภิบาลส่งผลต่อความเหลื่อมล้ำทางการกระจายรายได้ที่ลดลง กล่าวคือการเพิ่มของรายได้ต่อประชากรและการลงทุนโดยตรงจากต่างประเทศตามกรอบธรรมาภิบาลที่ดีจะช่วยลดความเหลื่อมล้ำทางการกระจายรายได้ และการดำเนินความร่วมมือที่สำคัญในมิติเศรษฐกิจและการกำหนดแนวนโยบายในระดับภูมิภาคและประเทศภาคีในกลุ่มประเทศก่อตั้งอาเซียนควรตระหนักเรื่องการลงทุนโดยตรงจากต่างประเทศตามกรอบธรรมาภิบาลที่ดีจะลดความแตกต่างความเหลื่อมล้ำและไม่เป็นธรรมซึ่งส่งผลต่อการพัฒนาเศรษฐกิจอย่างยั่งยืน

คำสำคัญ: การลงทุนโดยตรงจากต่างประเทศ, การวิเคราะห์ข้อมูลพาแนลสมดุล, ธรรมาภิบาล, สัมประสิทธิ์จีนิ

Introduction

Foreign Direct Investment (FDI) in the early 1960s was regarded as a form of economic colonization in developing countries. This pessimistic attitude had been changed toward FDI involvement which an array of FDI incentives, measures, and policies were adopted to have a favourable influx of foreign investment (Bende - Nabende, 1999; Tongzon, 1998). The impacts of inward FDI can be beneficial for economic development through inward capital accumulation, technological and productive spillover, managerial skill and knowledge, competitive advantage environment, and employment generation to the recipients' countries (Nunnenkamp, Hühne, & Herzer 2014; Kohpaiboon, 2006). FDI has also been recognised as the engine of economic growth influencing the process of poverty alleviation and battling uneven distribution of income. However, most developing countries in which FDI contribute to enhance economic growth would increase in income inequality, which is a major concern as one of the world problems (Nguyen, Pham, Do, & Le, 2021).

In the context of ASEAN - 5, consisting of Indonesia, Malaysia, The Philippines, Singapore, and Thailand, are market - based economies with a substantial amount of FDI inflows into the region. ASEAN - 5 members with different backgrounds have shared the development goals with long history of underdevelopment, unemployment, poverty, and inequality (Bende - Nabende, 1999). The member states have a sense of shared destiny in economic growth, social progress, and cultural development influenced by ASEAN structure namely the Political - Security, Economic and Socio - Cultural Community. Among five founder nations, only Singapore is standing out to have the distinct growth performance and has always received the highest flows of inward FDI with at least 50 % in total among ASEAN - 5 over the last two decade (ASEAN Secretariat, 2021).

Bende - Nabende (1999) stated that FDI helps in promoting competitiveness and improving economic conditions for industrial development. ASEAN policies at regional and national level have a limit of success continue to improve in attracting FDI. Foreign investment flowing into ASEAN in 1960s dominated by USA, UK, Germany, The Netherlands, and Japan. An influx of foreign direct investment had a dramatic change in 1970s and 1980s via incentive to promote FDI into ASEAN. The amount of FDI were only 539 million (US\$) in 1972 and increased tremendously by 1982 more than 500%. In 2003, the amount of FDI inflows was registered as 18 billion (US\$) which increased more than 22% over a decade. However, due to financial crisis that affected most ASEAN countries in 1997, FDI inflows had been influenced by decreasing in foreign investment about 23%. FDI to ASEAN reached a peak of 74 billion in 2007 during the global financial crisis and dropping sharply to 49 billion and 39 billion in 2008 and 2009 respectively. In 2010, the severe drop has been compensated as the recovery returning to the same level gained in 2007. Then, the inflow of foreign direct investment continued to rise led by ASEAN - 5 countries and pushed the share of global FDI to developing economies to 20% in 2017 (UNTAD, 2019; Tongzon, 1998).

UNCTAD (2020) reported that ASEAN has been attractive to FDI originating in the USA, East Asia, European Union and intra ASEAN countries over the last two decade. Data on FDI in the region showed that ASEAN countries experienced different evolution of FDI and attracted high amount of FDI inflows in 2018, rising from \$147 billion in 2017 to \$155 billion, and region's share of global FDI inflows rose from 9.6 percent in 2017 to 11.5 percent in 2018. In ASEAN - 5, Singapore has been the largest recipient of gross FDI. The inflow of FDI into Indonesia has been improved significantly. However, the overall FDI inflow has fallen steadily over the last decade. Malaysia remains the important destination of FDI in developing ASEAN - 5, and Thailand has been one of the largest receivers after ASIAN financial crisis (1997 - 1998), while the Philippines was the weakest performer among ASEAN - 5. In addition, the foreign MNEs and intra ASEAN firms have invested their multinational activities to strengthen their regional networks and global value chain (UNCTAD, 2020) The intra ASEAN investors is one of the largest sources of FDI investment , accounted for 16% of FDI inflows in 2018 (UNCTAD, 2019) The greenfield FDI and merger and acquisition investment have an impact on economic growth in ASEAN (UNCTAD, 2020; Meon & Harms, 2018; UNCTAD & ASEAN Secretariat, 2018) ASEAN - 5 has continually been the potential region and being the engine growth to attract FDI in South East Asia. The inequality observed from the distribution of Gini ratio has not retreated in ASEAN - 5 while, GDP per capita and FDI among ASEAN - 5 increased tremendously over the last two decades (World Bank, 2020).

To make the societies function efficiently and economies are more stable and productive, good governance are required to ensure the decision - making on political and socio - economic development processes by strengthening the investment environment on the FDI and more even income distribution among regions (Matallah, 2019; Angeles - Castro, 2011) Governance dimensions(GOV) are classified by the worldwide governance indicators include "voice and accountability, political stability and absence of violence, government effectiveness, regulatory quality, rule of law, and control of corruption". The effectiveness of good governance indicators has an influence on economic performance and FDI inward flows which thereby mitigate the adverse effect of income inequality (Nguyen, Pham, Do, & Le, 2021) Although some studies provided the witnesses of FDI contributing to both decrease and increase in income inequality, others indicated the concern of inconclusive effects of inward and outward FDI (Nunnenkamp, Hühne, & Herzer, 2014; Figin & Görg, 2011) In the context of ASEAN - 5, empirical literature has not often taken governance into account. Thus, the study attempts to investigate the impact of inward FDI on inequality and to examine the governance as moderating role of policy implications on this matter.

Research Objective

The study aims to investigate the effects of inward FDI and governance performance on income inequality in the ASEAN - 5 region.

Research Question

What is the moderate role of governance on the relationship of FDI and income inequality and to what extent does the inward FDI has an influence on Income Inequality in ASEAN - 5

Research Sub - questions

What are the impacts of inward FDI and the important factors on income inequality. Does the governance performance that interact with inward FDI have an impact on income inequality

Literature Review

This section provides with a broad overview of income inequality, FDI, and the role of governance, and other related factors to place this study and to establish the conceptual framework and hypotheses as follows:

Several inequality indices such as Gini coefficient, Theil's entropy index, and Atkinson's index can be used to measure the deviation from equal distribution of income. Each inequality index solves the ambiguity and draw attention to aspects of inequality measure in the standard scale when considering the principle of distributive justice (Cowell, 2015). The Gini Index is widely used to capture the dispersion of income, introduced by Corrado Gini in 1912 and referred to as Gini concentration ratio. Gini Index has been used measuring inequality of income distribution within economy and aided the policy makers in development analysis more than a century. It was employed to evaluate inequality across individual income, equality of opportunity, and social welfare. The Gini coefficient has been longevity treated as the standard measure of income inequality because of its simplicity, useful decomposition, and widely available (Ostry, Berg, & Tsangarides, 2014).

The study provides the empirical linkage between FDI and inequality through the internal mechanism of the quality of governance. FDI has defined as a long - term investment by foreign firms through the mode of entry such as the acquisition of the ownership in associated enterprises and creation of subsidiary in foreign country. In general, FDI is referred to as an investment or outcome of a firm's decision to acquire an interest by foreign investor in diversifying some operational and business activities in another country (OECD, 1999) In developing countries, FDI takes many forms such as greenfield, joint ventures, mergers and acquisitions depend on the conditions of foreign investors and recipient countries (Mai, 2004) The technology transfer and knowledge spillover may affect FDI economic activities by changing the firms' competitive environment. Many ASEAN countries reform their policy to improve the investment climate with the hope of maximizing gain from FDI involvement (Bende - Nabende, 1999).

ASEAN - 5 countries, since the late 1980s, have offered the new setting of the foreign investment regime to economic development policy. The role of governance which can govern the operation of FDI inflows has been one of the important pillars in maintaining stability to attract foreign investment into developing economies. Angeles - Castro (2011) explained the efficient and effective institution building is the key factor affecting investment and showed that the presence of FDI has exacerbated income inequality; but the governance indicator could mitigate the adverse effects on income inequality. Similar results are found using nonlinear and endogenous framework by Nguyen, Pham, Do, and Le, (2021) that improving the quality of governance helps to promote economic development, attract foreign investment, and reduce income inequality.

The empirical literatures of FDI - inequality relationship provided different results and remained the issues and contributed the diverse arguments of FDI - income inequality. The first strand is that FDI has an influence in reducing income Inequality. Bilgin, Haug, and Ucal, (2016) attempted to analyse whether the relationship fit with the Heckscher - Ohlin theory of increasing wage and demand for less - skilled of labor abundant when FDI concentrates on less - skilled activities in developing country. They revealed that income inequality declined as FDI increased. In addition, Bende - Nabende (1999) indicated that FDI flows have promoted economic growth and improved regional competitiveness in middle - income countries. The economic structure change and industrialization process related to FDI by foreign affiliates may reduce income inequality. The second opposing view of studies is that FDI has an impact on increasing income Inequality. Choi (2006) reached a similar conclusion based on his panel data analysis of 119 countries concern with increasing in FDI on a greater income inequality. Nguyen, Pham, Do, and Le, (2021) and Mah (2015) found that FDI play an essential role in economic development which has the effect on employment and contributes to increase income inequality in Vietnam and China respectively. The third strand of studies, FDI has no impact or a nonlinear impact on income inequality. The literatures indicate FDI's effects on income inequality to individual - country data on the recipient countries are not unanimous. Franco and Gerussi (2012) empirically analysed of 17 Countries over the period 1990 - 2006. The result shown that FDI did not significantly have an influence on income inequality but expected the adverse effect of FDI - Inequality relationship, while openness of trade seems to be relevant. Whereas, Figini, and Görg (2007) using panel data from 103 countries with inverted Kuznets U shape function found income inequality has been diminished at later stage of development because the less skilled labor is employed after the technology has been implemented in the host developing countries. Few studies existed in the context of ASEAN - 5 region and have not often shown the effect of FDI with considerations for the aspects of governance effort which could help to reduce income inequality. Thus, this study mainly draws on unevenly income distribution and how the governance moderate inward FDI - inequality linkage which foreign investors play a great role in domestic economy and could yield substantial benefit in a more sustainable way in the future.

Research Methodology

The data provided by reputable organizations are obtained from the World Bank, ASEAN Secretariat, SWIID, and UNCTAD. The data collected are quantitative outcomes from the indicators interested using both descriptive and inferential statistics to carry out the variables characteristics and perform the hypothesis tests. The study attempts to analyse the impacts of FDI on income inequality while considering the importance of governance quality in ASEAN - 5 countries: Indonesia, Malaysia, The Philippines, Singapore, and Thailand. The study applies Fixed Effect Model (FEM), Random Effect Model (REM), focusing on the relationship of FDI on inequality and how the governance indicators moderate this FDI - inequality linkage for the period of 2002 - 2018. The

controlling determinants include GDP per capita and trade openness which we control the economic size in ASEAN - 5 heterogeneity. We also control firms' input related such as Gross Capital Formation. The governance quality is included in the model by averaging six governance indicators in careful investigating the causal effects of FDI in economic contexts upon income inequality.

The panel data model can be written as

$$y_{it} = \alpha + X'_{it}\beta + u_{it}$$

y_{it} is the Gini Index. X_{it} is a vector of the independent variables, FDI, and other control variables: GDP per capita (GDPPC), trade openness (Trade), Gross Capital Formation (GCF), GOV is the average of six governance indicators which reflect the composite information of quality of governance, and the interaction term of FDI with bundled governance.

The FEM takes α to be a group specific constant term that embodies all observable effects. u_{it} is the error component. The FEM lets the intercept capture ASEAN - 5 country - specific effects. In the REM, differences across countries are captured through error term u_{it} which can be written as

$$u_{it} = \mu_i + v_{it}$$

Where μ_i is the unobservable individual specific error which is not correlated with the explanatory variables and v_{it} is remainder disturbance as usual error combined time series and cross - section component, the regression gives

$$y_{it} = \alpha + X'_{it}\beta + \mu_i + v_{it}$$

The REM specifies that μ_i is a group specific random element. Then, the study conducts the Hausman test to decide the suitability of the FEM or REM as a model for the empirical analysis. It also checks for heterogeneity to prevent any distortion in the panel analysis (Baltagi, 2015; Pesaran & Smith, 1995).

Results and Discussion

Figure 1 presents the evidence on the uneven distribution of income of population by plotting the change in Gini Indexes from 2002 - 2018 for selected ASEAN - 5 countries. Singapore's Gini Index has the lowest level of income disparity in the region. The highest decrease in income gap during period of analysis was identified by Thailand. Indonesia's income inequality has worsened as indicated by the World Bank data source. This trend is expected to continue, while Malaysia, The Philippines, and Thailand progress in achieving a more equal distribution of income. For Malaysia, the Gini Index indicates a slight improvement in income inequality than the other emerging economies. The Gini Ratio appeared to continually improve by decreasing inequality rate over time in other ASEAN - 5 member states, with the exception of Indonesia which Gini ratio was substantially recorded higher than the others to the recently available Gini data point.

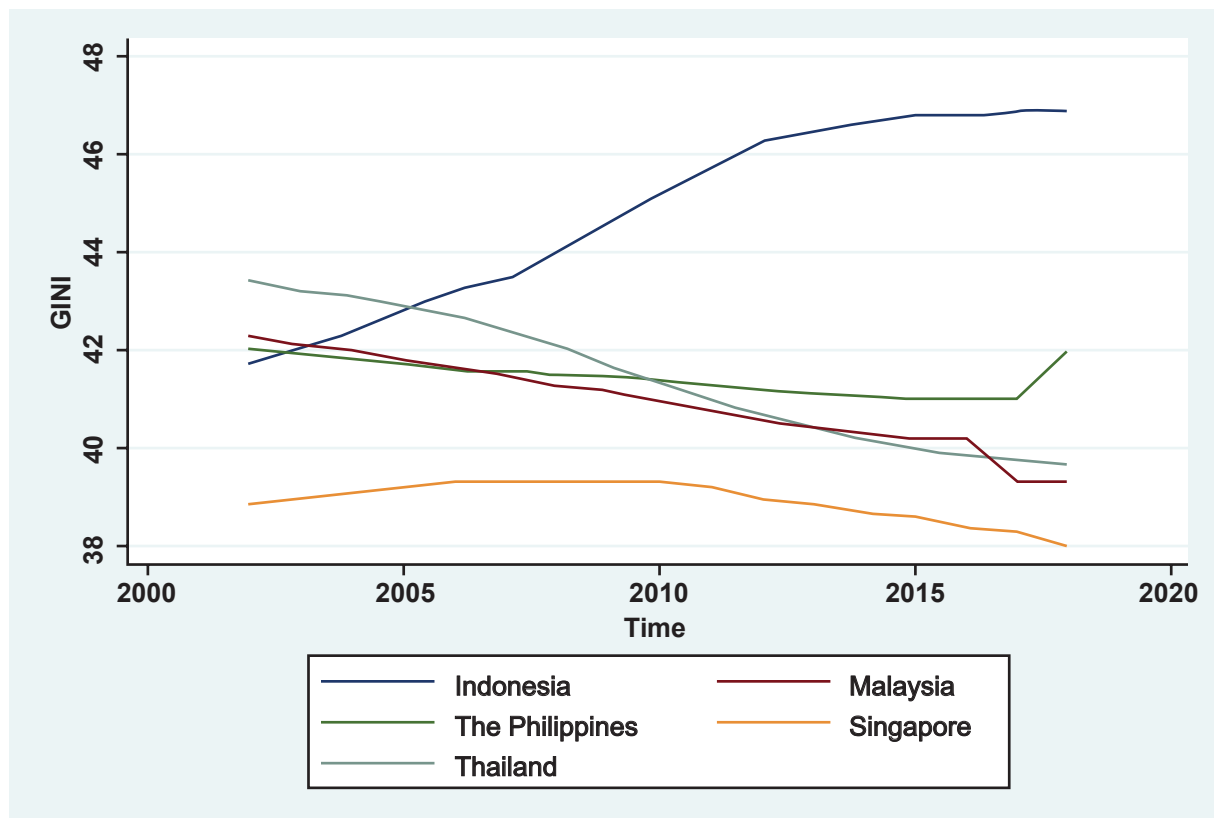


Figure 1 Gini Index

Source: The author

Figure 2 shows the FDI inflows as a percentage of GDP during the same timeframe. Foreign Direct Investment flows to ASEAN - 5 rose from 14 billion (\$US) in 2002 to 133 billion (\$US) in 2018 (World Bank, 2021). Singapore has been contributed the largest recipient with its highest share of FDI inflows on average at 19.53 percent, followed by Malaysia, Thailand, Indonesia, and The Philippines respectively. In addition, the trend of Singapore's aggregate FDI inflows has significantly tripled since 2002 while the share of FDI inflow's trend of the rest of ASEAN - 5 has been one of the important keys as a source of economic development. In general, FDI inflows make an essential contribution to growth and development in the ASEAN - 5 especially for developing members, for example, Indonesia can be expected to reach the regional average among developing countries although starting from the lowest base over the periods studied.

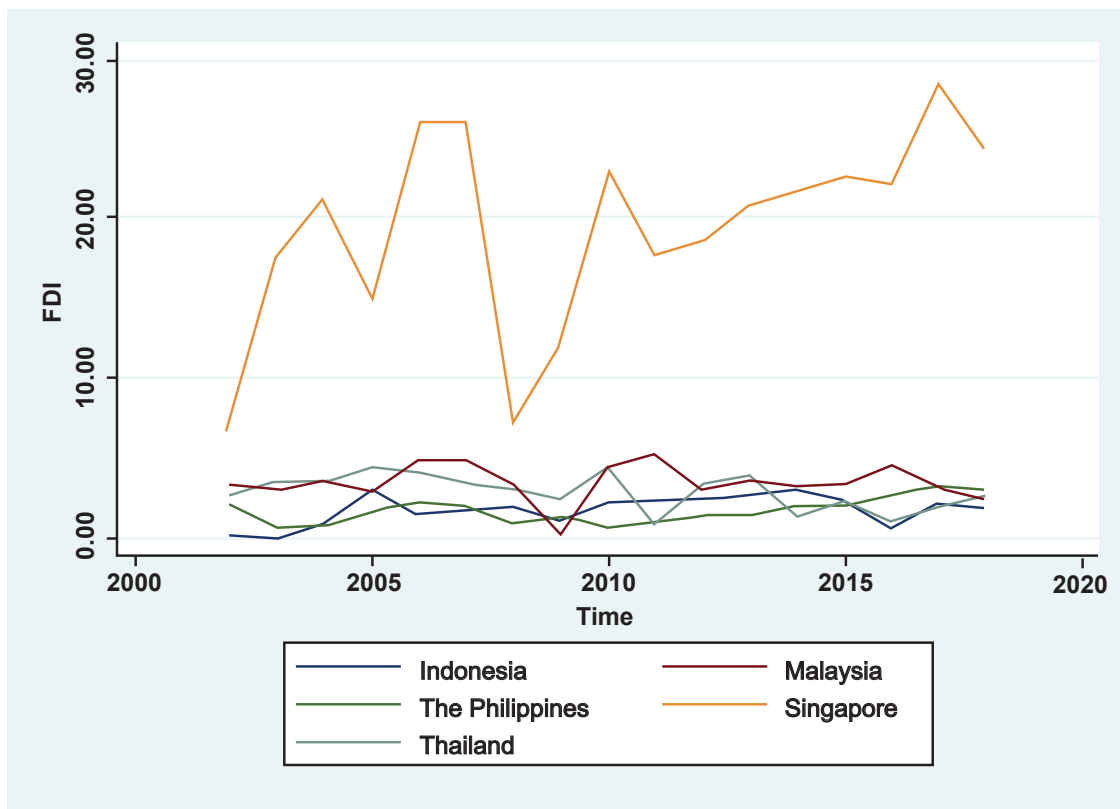


Figure 2 FDI Inflows

Source: The author

Governance (GOV) is important in the operation of foreign investment mechanisms through volatile market conditions. Good governance has been one of a major component of international investment standards that contribute to economic growth and financial stability in achieving the impact of economic development. The implementation of good governance can create a business climate to increase investment growth. GOV measured by the average of six governance indicators which are treated equally weight, shows the evidence on governance performance with an index normalized to range from the lowest score of -2.5 (weak) to the highest score of 2.5 (strong).

As shown in figure 3, Singapore is relatively better than the others in terms of overall governance indicator values with an average of 1.64 that are more efficient and effective to support its economy. Followed by Malaysia (.44), meanwhile, the other ASEAN - 5 countries have a negative average score for the overall index: Thailand (-.31), The Philippines (-.59), and the lowest is Indonesia with an average score of -.62. A higher score indicates the awareness of better governance performance summarizing from the WGI data source. By plotting the evolution of the average GOV index over the 2002 - 2018 period, Singapore ranks first among ASEAN - 5 in terms of the average of governance score. Thailand's governance score has dropped to a negative score since 2004. The governance performance of Indonesia, The Philippines, and

Thailand are weak as reflected with a negative GOV index. GOV in each country of ASEAN - 5 has been essentially flat over the past two decades, meanwhile, only Indonesia that GOV trajectory has been slightly increased.

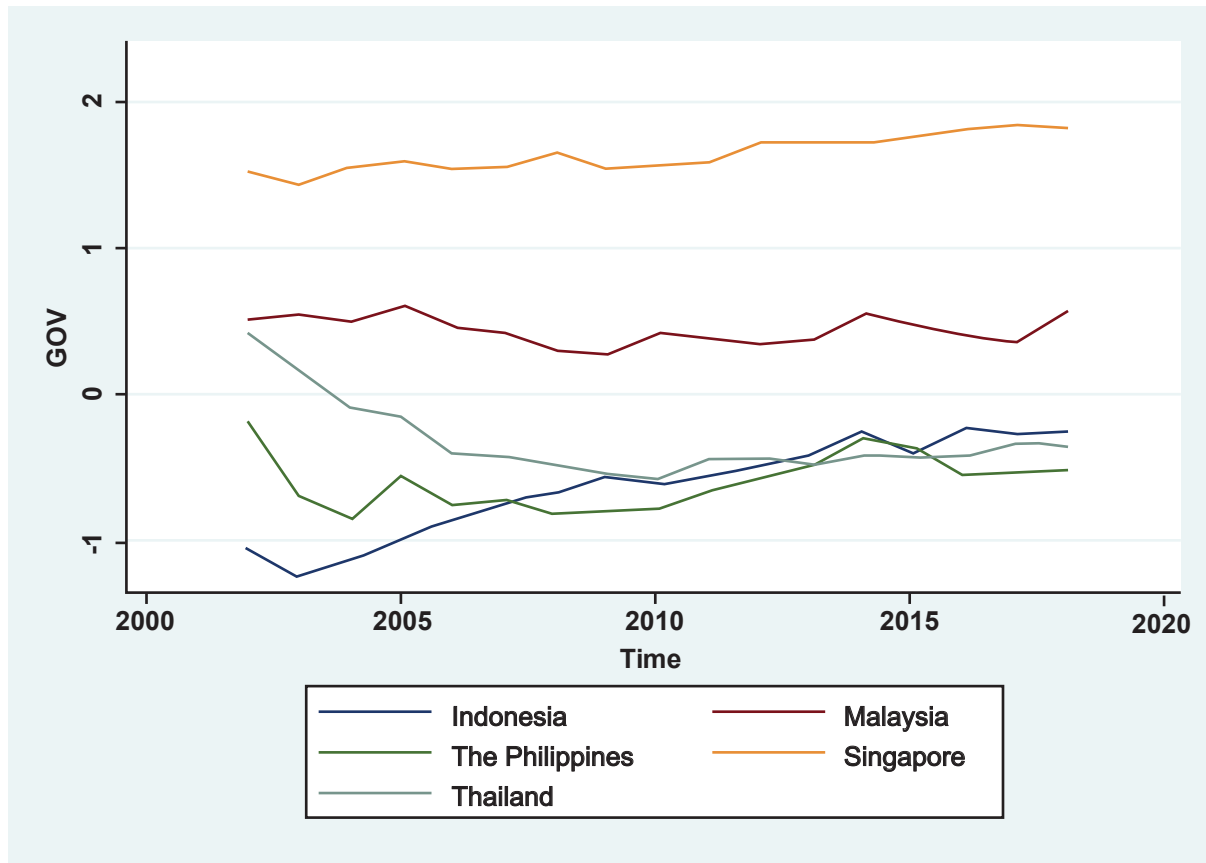


Figure 3 Governance Performance

Source: The author

The hypotheses are stated as:

H1: There is a positive relationship between the aggregate FDI and income inequality

H2: The governance moderates the impact of FDI in reduction on income inequality

The data indicates the most fluctuation of GDPPC with the minimum value of \$1,710 and maximum value of \$59,261. This data seems less surprising because of Singapore's high achievement of income per capita across ASEAN - 5 region. FDI and Trade openness also experience a fluctuation overtime in terms of their maximum - minimum value indicating selected variables varied by different levels of economic development.

The pairwise coefficients between explanatory variables reveal that as the level of economic development represented by GDP per capita is varied and correlated with other independent variables among countries. Thus, the attempt should be made to correct this issue by dropping the GDP per capita as can be seen in the estimated model 3 and 4 respectively. Then, we make the choice of the estimator by means of the Hausman test and found that FEM is preferred. Table 1 presents the estimation results of using the Panel Least Squares method to empirically analyse the factor influencing Income Inequality. Model 1 and model 2 present the estimated result of Fixed Effect and Random Effect respectively. The result indicates that variable FDI has a positive impact on Gini Coefficient, which leads to a widening in income inequality but is not significant, suggesting that there is no relationship between aggregate FDI and inequality. In addition, GDP per capita significantly yields a negative coefficient, whereas the other variables have a positive coefficient and strongly significant.

Model 3 shows that FDI and interaction of FDI and GOV become significant at the 10 percent level. FDI, Trade, GCF, and, GOV have a positive influence on Gini Index which means these factors will have an influence on increasing income inequality in ASEAN - 5. The aggregate FDI inflows are associated with more income inequality in ASEAN - 5 countries. Holding other factors constant, an amount of 1% increase of direct foreign investment will generate an increase on average in inequality by 0.136 points. GCF has a positive significant coefficient in influencing an increase in income inequality. Theoretically, Gross Capital Formation as the measure of domestic investment facilitates the productive capacity in the economy, depending on which economic activities benefit more from GCF. Thus, it would imply to have an ambiguous effect on income inequality depending on this control variable benefit more of high - skill or low - skill sector. The impact of trade liberalization on income inequality is a positive sign which implies that trade openness of a given region may worsen income disparity in countries relatively abundant skilled labour. With respect to the average trade flow index, the finding indicates the more the degree of trade openness, the more the unfavourable effects on inequality. Likewise, the Governance performance (GOV) has a positive and significant effect indicating Income inequality may be exacerbated by the low quality of governance. The result reflects that the effectiveness of ASEAN - 5 policy implications may not likely to offset the adverse effects of inward FDI. The coefficient of the interaction variable between FDI and Governance is a negatively and strongly significant. The results suggest that an institutional improvement for FDI will decrease in inequality disparity because the good quality of governance create a favourable investment climate of more FDI activities promoting the positive spillover beyond the economic growth, particularly for developing countries.

Table 1 Estimation results of FDI on income inequality

	(1)	(2)	(3)	(4)
	Gini (FE)	Gini (RE)	Gini (FE)	Gini (RE)
FDI	0.0457	-0.181	0.136*	0.0625
	(0.0786)	(0.1127)	(0.0754)	(0.1162)
GDPPC	-0.00013***	-0.00021***		
	(0.0000)	(0.0000)		
Trade	0.0117***	0.00122	0.0167***	-0.0095***
	(0.0044)	(0.0038)	(0.0043)	(0.0036)
GCF	0.112***	0.311***	0.0580*	0.236***
	(0.0353)	(0.0327)	(0.0313)	(0.0333)
GOV	2.997***	0.276	3.258***	-0.169
	(0.4512)	(0.4111)	(0.4630)	(0.4586)
FDIGOV	0.0180	0.231***	-0.0876*	-0.0528
	(0.0567)	(0.0777)	(0.0453)	(0.0607)
Cons	37.94***	36.01***	36.85***	37.09***
	(1.1224)	(0.9599)	(1.1075)	(1.0685)
N	85	85	85	85
R ² _Within	0.624	0.336	0.581	0.126

Notes: Standard errors in parentheses, * $p < .10$, ** $p < .05$, *** $p < .01$

Source: The Author's Estimation

We apply the additional models in table 2 when the global financial crisis and stage of development are taken into account. The bundled governance composite variable is positively significant. The dummy coefficients representing global crisis period and after the global crisis have the positive and negative sign respectively but all estimated coefficients of the dummy variables are statistically insignificant. These sign may indicate that economics volatility triggered by the global financial crisis in the region shows the unclear distributional evidences on inequality. FDI square variable (FDI2) in model 7 and 8 is as of non - significance, indicating no nonlinearity between FDI and inequality in ASEAN - 5 economies. The finding implies that in term of Kuznets hypothesized the industrial countries experience an increase and then decline in inequality is not supported by different stages of development within ASEAN - 5 economies.

Table 2 Estimation results of FDI on income inequality (Financial Crisis)

	(5)	(6)	(7)	(8)
	Gini(FE)	Gini(RE)	Gini(FE)	Gini(RE)
FDI	0.111 (0.0777)	-0.0075 (0.1010)	0.0880 (0.0961)	-0.0544 (0.1298)
Trade	0.0135*** (0.0049)	-0.0141*** (0.0032)	0.0131** (0.0050)	-0.0133*** (0.0034)
GCF	0.0868** (0.0374)	0.287*** (0.0296)	0.0886** (0.0379)	0.291*** (0.0303)
GOV	3.097*** (0.4815)	0.296 (0.3974)	3.139*** (0.4942)	0.374 (0.4210)
FDIGOV	-0.0763 (0.0460)	-0.00852 (0.0526)	-0.0967 (0.0672)	-0.0303 (0.0649)
Fin - crisis (2007)	0.193 (0.3820)	0.0505 (0.5375)	0.174 (0.3868)	0.0210 (0.5422)
Fin - crisis (After 2007)	-0.308 (0.2537)	-1.571*** (0.2879)	-0.318 (0.2562)	-1.562*** (0.2896)
FDI2			0.0017 (0.0042)	0.0027 (0.0048)
Cons	36.90*** (1.1119)	37.60*** (0.9162)	37.04*** (1.1626)	37.56*** (0.9240)
N	85	85	85	85
R ² _Within	0.594	0.287	0.595	0.295

Notes: Standard errors in parentheses, * p < .10, ** p < .05, *** p < .01

Source: The Author's Estimation

The Hausman test statistics which help to choose between FEM and REM indicates the rejection of the null hypothesis of no significant difference between these estimators. Therefore, the FEM coefficients estimated of model 1 and 3 are more consistent and appropriate.

Conclusion and Recommendation

The study aimed to contribute the understanding of the moderating role of governance in determining the income inequality effects of FDI. We employ panel data analysis across ASEAN - 5 economies over the period of 2002 - 2018 by using FEM, REM estimator; Hausman tests determine that FEM is more appropriate than REM for all panel data models.

Income inequality and benefit of FDI remain the issues and major challenges in ASEAN - 5 region. One of the main findings confirm the contribution of inward FDI to income inequality is inconclusive. FDI can contribute to uneven distribution of income through economic growth and factor of endowments in recipient countries. The improvement in the relationship between inward FDI and income inequality is consistent when taking governance into account. Each country in the region have disproportionately benefited from FDI effects that FDI drives the different degree of the economic development process. We found no evidence to support Kuznets hypothesis especially when taking the global crisis period into account. However, the combined effect of FDI and governance is effective in mitigating the adverse effect of FDI on income distribution. We conclude that the effect of FDI inflows depends on the magnitude of the quality of governance in the host country; The interaction between the governance and FDI inflows alleviate income inequality in countries with higher quality of governance. Thus, the emphasis on coherence and coordination among policies at broader level of governance in the various mechanisms can steer economy more productive and competitive in the region. For example, the government effectiveness and regulatory system in economic policy not only involve with central bank and financial institutions but also in education, labour market, and social policies for the smooth flow of FDI through inclusively investment environment to achieve sustainable growth and equitable distribution of income.

Most of ASEAN - 5 countries have been experiencing persistent income inequality over time. This provides the evidence for the implications associated with FDI and an opportunity for government authorities to design policies that enable the benefits of FDI to reduce the inequality and enhance the ASEAN - 5 economies. The entry of FDI can be influenced by stable governance which regulate interaction in member states by their existing institutions. The countries with higher institutional quality are more successful for economic development in linking spatial patterns to economic and social dynamics and adopting productivities and welfare which concern with distributive well - being and quality of life. The regional diversifications tend to proliferate in productive activities with well - functioning institutions (Van, Boschma, Xiao, & Cortinovis, 2017) It will make economic conditions predictable and reliable of future patterns of growth and development. In addition, good governance can provide certainty for domestic and foreign investors so that they can maximize the resources to increase efficiency and reduce production costs. The quality of good governance in a host country can help motivating an investment climate to promote economic development, and increasing the long - term commitment of investors. The benefit of FDI inflows since the 2000s have been unevenly distributed in this region. A series of national and regional policies designed and implemented have had limited successes even the policy environment continued to improve (UNCTAD, 2021) Therefore, ASEAN - 5 policies promoting sustainable economic development should be more focused and balanced with FDI - related measures that address income inequality concerns.

It is of the view that analysing this relationship of governance performance that interact with FDI on income inequality could result in further research recommendation as follows:

1. Further research concerning the alternative inequality measures such as welfare index, Theil's entropy index, Herfindahl's index, and Atkinson's index are needed to assess inequality which might capture the aspects that are of interest for researchers.

2. Considering the issues related to the topic more deeply such as providing the further insight on the potential structure and types of outward and inward FDI by sectors or industries, using a different governance approach, expanding the conceptual framework in this area by focusing on human capital, institutional change, technological spillover, etc. and performing different analytical techniques would be required to evaluate the future FDI - inequality nexus.

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