

## Achievements and Determinants of Inclusive Growth in Asean Countries

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**ABSTRACT:** The positive growing economy and the declining poverty rate in ASEAN actually raises the income gap problem between rich and poor. Therefore, ASEAN countries shift their development focus on achieving inclusive growth. The measurement of inclusive growth coefficient in this study used the Poverty-Equivalent Growth Rate (PEGR) method, while the factors affecting inclusive growth are obtained from panel data models. The results concluded that Cambodia and Vietnam have an improvement on the inclusive growth over six years, whereas 5 other countries have deteriorated. One interesting finding on panel data estimation is that credit to the private sector has a negative impact on inclusive growth.

**KEY WORD:** inclusive growth, inequality, PEGR, panel data, ASEAN

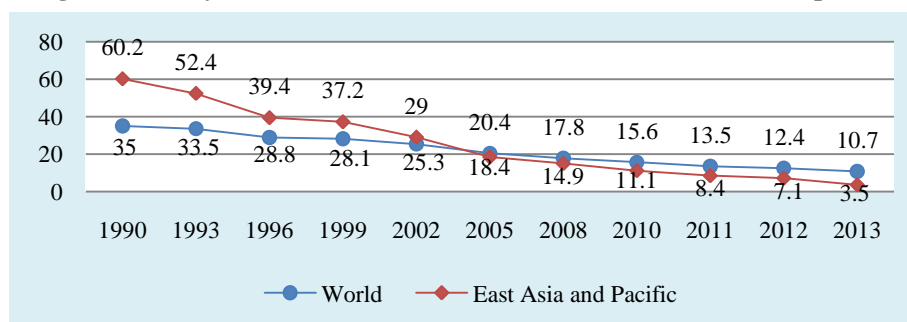
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### I. INTRODUCTION

The achievements of countries in the world in reducing poverty is reflected in the declining of the percentage of the poor from 1990 by 35 per cent to 15.6 per cent in 2011 and falling back to 10.7 per cent in 2013. East Asia and Pacific's achievements including Southeast Asia are far more exciting which have the percentage of declining rate of the poor that is greater than the percentage of declining rate of the world's poor. Starting at 60.2 percent in 1990, it dropped to 11.1 percent in 2010 and fell back to 3.5 percent in 2013.

Figure 1 Poverty of The World and East Asia and Pacific, 1990-2013 (percent)



Source : World Bank, 2015

The success of East Asia and Pacific countries, especially Southeast Asian countries, cannot be separated from the high economic growth achieved by these countries. Within a decade, the average economic growth of Southeast Asian countries has always been above the average world economic growth and even higher than the average growth of East Asian and Pacific countries. Even during the crisis of 2008-2009, Southeast Asian countries were able to create positive growth as countries in the world, especially Europe and America, experienced economic decline.

The positive economic growth is a necessary condition to reduce poverty in a sustainable manner, but it is not a sufficient condition to create income equity and minimize the severity of poverty. Economic growth does not guarantee that everyone will benefit equally. On the other hand, economic growth creates a gap between low-income and middle-income populations.

The studies proving that the income inequality in ASEAN countries in line with the rapid economic growth have been done before. Yap (2013) showed that there is a widening gap in ASEAN countries in the 1990s towards the 2000s. Other researchers, such as Bock (2014), have proved that there has been an increase in inequality in Indonesia and the Philippines since the 2008 global crisis. Chongvilaivan (2014) also proved

similarly that economic growth and poverty alleviation in ASEAN countries are not aligned with the equal income distribution that wants to achieve. The results of those studies can be concluded that income inequality is initiated by an increase in labor-wage inequalities by expertise, a decline in the share of labor income versus the upper part of capital, and the disparities between rural and urban development.

Based on the Gini index of Southeast Asia countries from 2002 to 2012 in Table 1, the average value of the Gini Index has increased indicating more economic growth is enjoyed by the rich and creating a widening gap with the poor.

**Table 1. Value of Gini Index of Southeast Asian Countries Year 2002- 2012**

Country	Gini Index	Year	Gini Index	Year
Indonesia	29.74	2002	38.14	2011
Malaysia	37.91	2004	46.21	2009
Thailand	41.98	2002	39.37	2010
Vietnam	37.55	2002	35.62	2012
Cambodia	35.53	2004	31.82	2011
Laos	32.47	2002	36.22	2012
Philippines	44.48	2003	43.03	2012
Average	37.09	-	38.63	-

Source : World Bank, 2016 (processed)

High income inequality will weaken the impact of economic growth on poverty reduction and ultimately slow the rate of economic growth itself. From these findings, the development that has been focusing on economic growth is now turning to growth that creates income equity, which is known as inclusive growth.

So far, the concept of inclusive growth is still being studied and developed. Various concepts are offered by researchers about how growth should work in the economy. The factors such as inequality, poverty, and labor are often linked in outlining the concept of inclusive growth. Economic growth can be said to be qualified if it is able to achieve inclusive growth, i.e. growth that can reduce poverty, reduce inequality, and absorb more labor.

This study focuses on identifying macroeconomic indicators that are expected to affect inclusive growth in the ASEAN region from 2010-2015. The countries studied are 7 ASEAN member countries namely Indonesia, Malaysia, Singapore, Thailand, Philippines, Vietnam and Cambodia. While the other countries such as Myanmar, Laos, and Brunei Darussalam which also include in ASEAN region cannot be included in the study because of data limitations on the variables to be used.

## II. LITERATURE REVIEW

### 2.1 The Concept of Inclusive Growth

The idea of inclusive growth begins with the concept of pro-poor growth and Kakwani and Pernia (2000) provide a distinction between pro-poor growth and inclusive growth. Both emphasized that inclusive growth is a pro-poor growth that not only focuses on income both level and spreading, but also includes non-income aspects such as how growth can be enjoyed by all social groups (ethnicity, gender, and region). The concept of inclusive growth then became an interesting study that spawned new concepts explaining how inclusive growth is.

Habito (2009) defines inclusive growth as the growth of gross domestic product (GDP) that can reduce poverty. Furthermore, Klasen (2010) stated that economic growth is called inclusive if it can reduce the number of "disadvantaged" groups in the economy by reducing the disparity between income groups. Lanchovichina and Gable (2012) said that inclusive growth is about increasing the rate of growth as well as enlarging the size of the economy by requiring the level of investment role and increasing opportunities for productive labor. In this study, the operational definition used is called inclusive growth if it can create equity in income and remain effective in reducing poverty.

### 2.2 Measurement of Inclusive Growth

There are several approaches in determining the inclusion of economic growth. Ali and Son (2007) defined that inclusive growth is as growth that enhances social opportunity function. In this context, inclusive growth depends on two factors: (i) the average opportunity available to the population, and (ii) how opportunities are shared among the population. Growth is said to be inclusive if social opportunities can be spread across the population. How opportunities can be scattered in society are depicted in the social opportunity curve, the higher the curve the greater the function of social opportunities.

Another alternative for measuring inclusive growth is formulated by Klasen (2010). In formulating measurement methods for inclusive growth, Klasen adapted the method of pro-poor growth research. Specifically, the adaptation is done from Kakwani and Son (2008) research on the concept of "poverty-equivalent growth rate (PEGR)" that defines inclusive growth as growth for disadvantaged groups.

The method of calculating PEGR is by comparing poverty, income distribution (Lorenz curve) and average income of the population at the beginning of the period with the situation at the end of the period.

Inclusive growth can be measured by adopting a description of the PEGR concept with the following formula:

$$IG_{ij} = \frac{E_{ij}}{\bar{E}_j} \times \bar{E}_j$$

where :

$IG_{ij}$  = Inclusive growth coefficient

$E_{ij}$  = Group growth i in relation to indicator j

$\bar{E}_j$  = Indicator growth j

In this case, i refers to certain disadvantaged groups and j refers to the indicator in question (eg. income growth or expansion in education).

### 2.3 Poverty and Inequality as a Measure of Inclusiveness

Poverty can be interpreted as a relative condition and an absolute condition. Someone is said to be relative poor if income and access to goods and services are relatively low compared to the average person in an economy. While someone is said to be absolute poor if unable to meet the basic needs that have been defined as a standard of decent living conditions (Todaro, 2000). Poverty in general can be interpreted as a person's inability to meet basic standard needs for every aspect of his life.

The existence of underdevelopment, market imperfection, and lack of living capital, leads to the low productivity that can lead to low income they receive. Low incomes will have implications for low savings and investments that result in underdevelopment and so on. This endless cycle then became known as the concept of vicious circle poverty.

As the limitations of the concept of inclusive growth in this study are limited to how economic growth can reduce poverty and reduce inequality, the factors to be used in this study are limited to the factors affecting poverty and inequality. Factors related to poverty in Levernier's research, et al. (2000) and Ravallion and Wodon (1999) models are: per capita income, government expenditure, life expectancy, literacy rate, and other factors.

While the factors that influence the inequality based on Adelman and Morris research results, in Arsyad (1999)) are high population growth, inflation, capital-intensive investments, exchange rate deterioration, inequality of social mobility, destruction of people's craft industry, and import substitution industry policy.

## III. METHODOLOGY

### 3.1 Measurement of Inclusive Growth

To answer the problem, this research uses the approach formulated by Kakwani and Son (2008) and developed by Klasen (2010). The definition of inclusive growth used in this study is a combination of several concepts. Growth is called inclusive if the growth is able to reduce poverty and reduce inequality. Inclusive growth can be measured from two directions through the path of poverty reduction and the path to decrease inequality with the following formula:

**3.1.1 Inclusive growth in poverty reduction**, the coefficient is :

$$IGp = (Epg / Ep) \hat{G}g$$

where :

$IGp$  : Inclusive growth coefficient in reducing poverty

$Ep$  : Elasticity of poverty to the average income

$Epg$  : Elasticity of poverty to economic growth

$\hat{G}g$  : Economic growth

$IGp$  expresses inclusive growth in poverty reduction, so growth is said inclusive if the value of  $IGp > \hat{G}g$ .

The same way in the PEGR concept is used to calculate elasticity. By defining poverty (P) as a function of the number of poor (z) and the average income of the population ( $\kappa$ ), it can be written as follows:

$$P = P(z, \kappa)$$

$$P_{12} = P_2 - P_1 = \ln [ P(z_2, \kappa_2) ] - \ln [ P(z_1, \kappa_1) ]$$

While the change of the percentage in the average income of the population ( $\Psi$ ) can be calculated as:

$$\Psi = \ln(\kappa_2) - \ln(\kappa_1)$$

$$Ep = P_{12} / \Psi$$

Economic growth ( $\hat{G}g$ ) is calculated as a change of Gross Domestic Product (GDP) in the period, so economic growth can be written as follows:

$$\hat{G}g = \ln(PDRB_2) - \ln(PDRB_1)$$

$$Epg = P_{12} / \hat{G}g$$

**3.1.2 Inclusive growth in decreasing inequality**, the coefficient is:

$$IGin = (Ein.g / Ein) \hat{G}g$$

where :

IGin : Inclusive growth coefficient in reducing inequality

Ein : Elasticity of inequality to average income

Ein.g : Elasticity of inequality to economic growth

$\hat{G}g$  : Economic growth

IGin expresses the inclusive growth in reducing inequality, so growth is said to be inclusive if the value of  $IGin > \hat{G}g$ . By defining the inequality (In) as a function of the gini index (GINI) and the average income of the population ( $\kappa$ ), which is written as follows:

$$In = In (GINI, \kappa)$$

$$In_{12} = In_2 - In_1 = \ln [ In (GINI_2, \kappa_2) - \ln [ In (GINI_1, \kappa_1) ] ]$$

Thus, the elasticity of inequality to the average income (Gini) can be calculated as:

$$Ein = In_{12} / \Psi$$

$$Ein.g = In_{12} / \hat{G}g$$

it is found that:

$$G = IGp = IGin = (\Psi / \hat{G}g) \hat{G}g$$

The results of PEGR calculations can be interpreted in table 2 below:

**Table 2 Interpretation of inclusive growth coefficient values**

Conditions	Interpretation
$IG = \hat{G}g$	Neutral growth
$IG > \hat{G}g$	Inclusive growth
$0 < IG < \hat{G}g$	Non-inclusive growth
$IG < 0$	Anti-pro-poor growth

**3.2 The Analysis of The Determinants of Inclusive Growth**

The data used to provide an overview of inclusive growth in ASEAN countries is the data during 6 years from 2010 to 2015. This country-level data is expected to provide a complete picture of ASEAN's economic conditions while providing a more detailed analysis for each country.

This study uses secondary data collected from various sources. Gross domestic product data, per capita income, exports and imports, loans, investments, Foreign Direct Investment (FDI), government consumption, inflation, and exchange rates are obtained from World Bank which are further processed for the purposes of this study. It can be seen in Table 3.

The methods used to estimate the panel data are common effect model (CEM), fixed effect model (FEM), and random effect model (REM). The statistical test for selecting the best model with the efficient results can be done with Chow Test, while Hausman Test is not necessary because the model is not possible to be estimated through REM (the number of individual observations is smaller than the number of variables used). Chow test is used to choose the best model between FEM and CEM. If the probability of the Chow Test  $< \alpha$ , it means reject  $H_0$ , meaning FEM is used for estimation. After choosing the best model, then the classical assumption tests to indicate the model free of the bias properties are: heteroscedasticity and multicollinearity. Mathematically, the general model for identifying factors affecting inclusive growth is defined as follows:

$$IG_{i,t} = \alpha_0 + \alpha_1 LogYPC_{i,t} + \alpha_2 TO_{i,t} + \alpha_3 CRD_{i,t} + \alpha_4 GOV_{i,t} + \alpha_5 INV_{i,t} + \alpha_6 INF_{i,t} + \alpha_7 FDI_{i,t} + \alpha_8 REER_{i,t} + \mu_{i,t}$$

where:

$IG_{i,t}$  : inclusive growth coefficient in country i at time t

$LogYPC_{i,t}$  : per capita income in country i at time t (log)

$TO_{i,t}$  : index of trade openness in country i at time t

$CRD_{i,t}$  : percentage of credit to GDP in country i at time t

$GOV_{i,t}$  : percentage of gov. expenditure to GDP in country I at time t

$INV_{i,t}$  : percentage of PMTB to GDP in country i at time t

$INF_{i,t}$  : the inflation rate in country i at time t

$FDI_{i,t}$  : percentage of FDI to GDP in country i at time t

$REER_{i,t}$  : the competitiveness of country i at time t in exchange of trade

$\mu_{i,t}$  : error term

The hypothesis used in this study is that variables in the model have a significant effect on inclusive growth.

**Table 3 Variables were used in the study**

Variable	Description	Unit	Literature
Inclusive Growth (IG)	The inclusiveness coefficient calculated using the PEGR	%	Kakwani and Son (2008), Klasen (2010)
Income per Capita (YPC)	Average income per person within 1 year	%	Klasen (2010), Sholihah (2014)
Trade Openness (TO)	The ratio of exports and imports to GDP $TO = \frac{X + M}{GDP}$	%	Anand,et al.(2013)
Credit to Private (CRD)	Private domestic credit to GDP ratio	%	Anand,et al.(2013)
Government Consumption (GOV)	The ratio of government spending to GDP	%	Anand,et al.(2013), Seok (2014)
Investment(INV)	Ratio of PMTB to GDP	%	Anand,et al. (2013)
Inflation (INF)	Inflation rate calculated from Consumer Price Index	%	Anand,et al. (2013)
Foreign Direct Investment (FDI)	Ratio of FDI inflows to GDP	%	Anand,et al. (2013)
Real Effective Exchange Rate (REER)	International trade competitiveness index $REER_t = \frac{(CUR\$_t/CUR_{it}) (P_i/P_{US})_t}{(CUR\$_0/CUR_{i0}) (P_i/P_{US})_0}$	-	Anand,et al. (2013)

\* Year 2010, USA reference country

## IV. RESULT AND ANALYSIS

### 4.1 Inclusive Growth Analysis

The calculation of the inclusive growth coefficient with the PEGR method found that economic growth in ASEAN countries during the period 2010 to 2015 has not been inclusive. It can be shown in Table 6. It is concluded from the inclusive growth coefficient value that is always smaller than the economic growth coefficient ( $IG < \hat{G}g$ ). The economic growth has not yet created an improvement in the decrease in income inequality.

If the inclusive growth coefficient value in 2010 is compared to the inclusive growth coefficient value in 2015, then countries with improved progress are Cambodia and Vietnam, while the other 5 countries have decreased performance. However, in terms of performance over the past year, countries with the increased inclusive growth coefficients are Thailand and Vietnam (the inclusive growth coefficient can be found in Appendix 1).

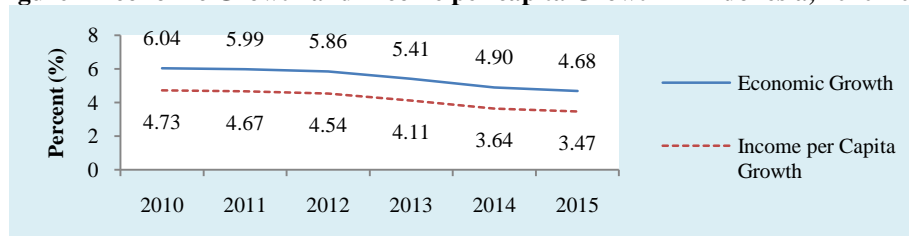
**Table 4 Comparison of Inclusive Growth Coefficients with Growth Coefficients of ASEAN Countries**

Country	2010		2011		2012		2013		2014		2015	
	IG	$\hat{G}g$	IG	$\hat{G}g$	IG	$\hat{G}g$	IG	$\hat{G}g$	IG	$\hat{G}g$	IG	$\hat{G}g$
Indonesia	0.05	0.06	0.05	0.06	0.05	0.06	0.04	0.05	0.04	0.05	0.03	0.05
Malaysia	0.06	0.07	0.04	0.05	0.04	0.05	0.03	0.05	0.04	0.06	0.03	0.05
Cambodia	0.04	0.06	0.05	0.07	0.05	0.07	0.06	0.07	0.05	0.07	0.05	0.07
Philippines	0.06	0.07	0.02	0.04	0.05	0.06	0.05	0.07	0.04	0.06	0.04	0.06
Singapore	0.12	0.14	0.04	0.06	0.01	0.04	0.03	0.05	0.02	0.03	0.01	0.02
Thailand	0.07	0.07	0.01	0.01	0.07	0.07	0.02	0.03	0.00	0.01	0.02	0.03
Vietnam	0.05	0.06	0.05	0.06	0.04	0.05	0.04	0.05	0.05	0.06	0.05	0.06

#### 4.1.1 The Inclusive Growth in Indonesia

The trend of Indonesian economic growth continues to slowdown from 2010 to 2015, as well as the income growth per capita. The absence of inclusive growth in Indonesia is due to a slower income growth in per capita compared to economic growth. This situation is increasingly worrisome because the slowdown that occurs in income growth per capita is greater than in economic growth.

**Figure 2 Economic Growth and Income per capita Growth in Indonesia, 2010-2015**

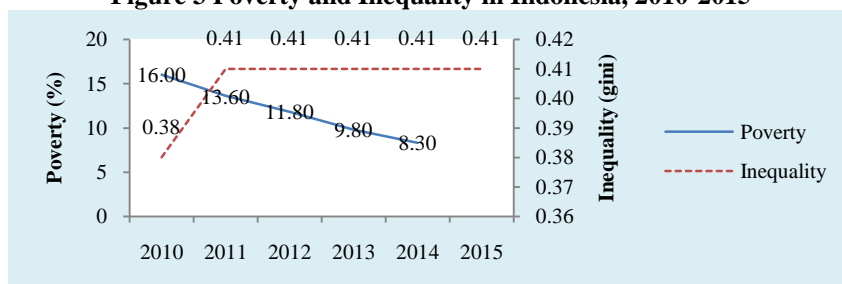


Source: World Development Indicators, World Bank

The inclusive growth coefficient in 2015 has deteriorated from 0.047 in 2010 to 0.035 in 2015 (Table 4). The achievement of poverty indicators and gini coefficients from 2010-2012 shows that economic growth in

Indonesia is already pro-poor but unable to reduce inequality. The inequality actually increased from 0.38 in 2010 to 0.41 in the next period (in Figure 3).

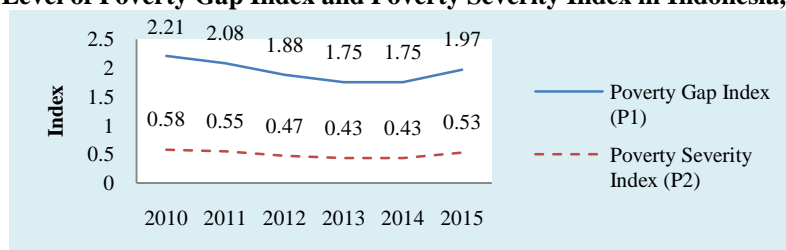
**Figure 3 Poverty and Inequality in Indonesia, 2010-2015**



Source : BPS, Statistics of Indonesia

According to BPS (2014), the large inequality is due to the income rate of the poor who cannot pursue the income of the rich. The effect is that income contribution from the poorest 40 percent of the population becomes smaller. Recorded in 2005 income contribution of the 40 percent of the poorest population reached 21 percent, while the year 2011 and beyond fell to 16 percent. While the contribution of 40 percent of the richest population rose from 40 percent in 2005 to 49 percent in 2011 and beyond. Although Indonesia succeeds in reducing poverty, there is still an imbalance among the poor, shown in Figure 8 showing in 2014 and 2015, the levels of the depth of poverty (P1) and severity of poverty (P2) have increased. This means that the disparities in the expenditure of the poor on the poverty line and among other poor people are getting bigger.

**Figure 4 Level of Poverty Gap Index and Poverty Severity Index in Indonesia, 2010-2015**



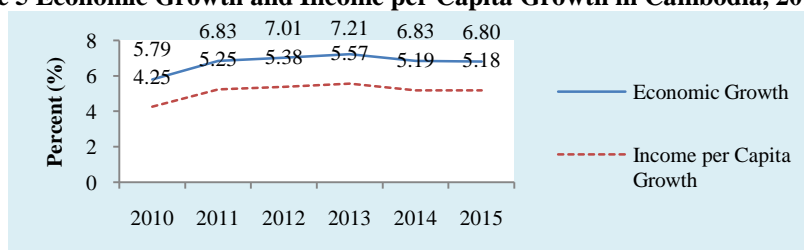
Source : BPS, Statistics of Indonesia

The problem of increasing inequality in Indonesia also becomes a topic of discussion at world level. According to the World Bank (2015), the benefits of economic growth are only enjoyed by the 20 percent of the richest of the population. There are at least four causes of inequality in Indonesia, namely: 1) inequality of opportunity to get a better life, 2) labor market inequality, 3) concentration of wealth, and 4) inequality in the face of shock.

#### 4.1.2 The Inclusive Growth in Cambodia

The economic growth in Cambodia from 2010 to 2013 has strengthened but weakened subsequently, as did the growth of its per capita population. The inclusion of inclusive growth in Cambodia has not been attained due to the slower growth in income per capita compared to the economic growth. However, the income growth per capita rate is on average faster than the rate of economic growth. Such conditions will enable the achievement of inclusive growth in Cambodia.

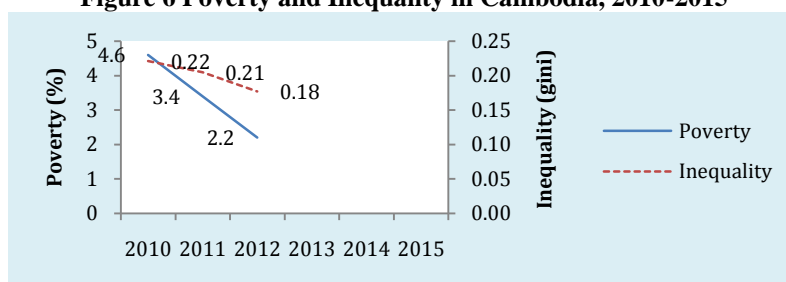
**Figure 5 Economic Growth and Income per Capita Growth in Cambodia, 2010-2015**



Source: World Development Indicators, World Bank

The inclusive growth coefficient in Cambodia in 2015 has improved from 0.042 in 2010 to 0.052 in 2015 (Table 4). The achievement of poverty indicators and Gini coefficients from 2010-2012 shows that economic growth in Cambodia is pro-poor and able to decrease inequality (Figure 6).

**Figure 6 Poverty and Inequality in Cambodia, 2010-2015**

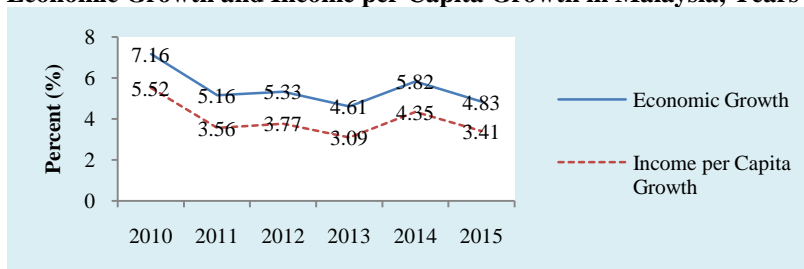


Source : [Poverty & Equity Databank](#) and [PovcalNet](#), World Bank

#### 4.1.3 The Inclusive Growth in Malaysia

Malaysia's economic growth has a fluctuating trend from 2010 to 2015, as well as its income growth per capita. The absence of inclusive growth in Malaysia has been attributed to a slower growth in income per capita compared to economic growth. Malaysia's income growth per capita rate is faster than its economic growth rate. As economic growth accelerates, income growth per capita is able to accelerate and as economic growth slows down, income growth per capita goes even further.

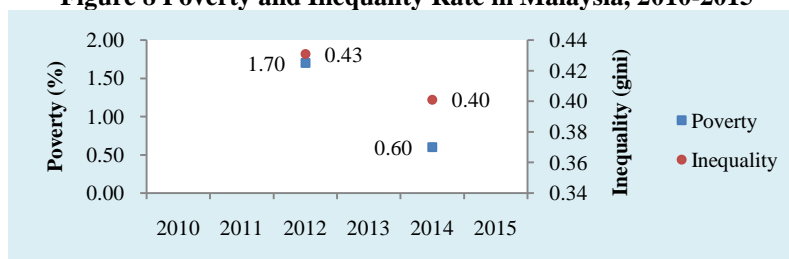
**Figure 7 Economic Growth and Income per Capita Growth in Malaysia, Years 2010-2015**



Source : World Development Indicators, World Bank

Malaysia has an incremental inclusive growth coefficient record in 2015 compared to 2010. The inclusion coefficient for 2010 was 0.055 down to 0.034 in 2015 (Table 4). The achievement of poverty indicators and Gini coefficients from 2012-2014 show that economic growth in Malaysia is already pro-poor and able to reduce inequality.

**Figure 8 Poverty and Inequality Rate in Malaysia, 2010-2015**

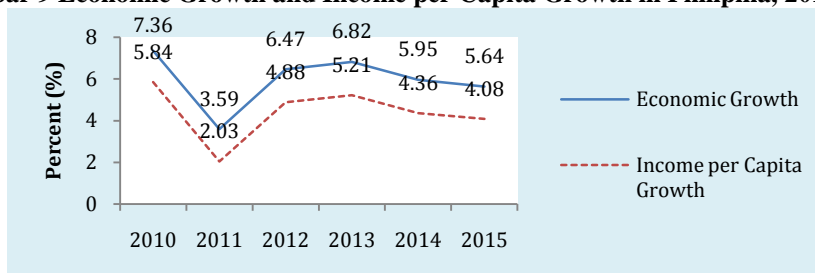


Source : Report of Household Income and Basic Amenities Survey 2014, Malaysia

#### 4.1.4 The Inclusive Growth in Philippines

The economic growth of Philippines weakened in 2011 then strengthened in the range of 5-6 percent, while the growth per capita grew to follow below. The absence of inclusive growth in the Philippines has been attributed to a slower growth in income per capita compared to economic growth. The growth rate of Philippine income per capita is slower when compared to the rate of economic growth. Therefore, the gap between the two is widening.

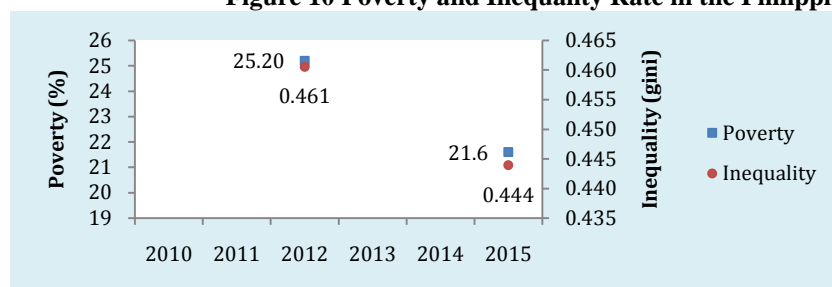
**Gambar 9 Economic Growth and Income per Capita Growth in Philipina, 2010-2015**



Sumber : World Development Indicators, World Bank

The achievement of the inclusive growth coefficient of the Philippines in 2015 has deteriorated from 0.058 in 2010 to 0.041 in 2015 (Table 4). The achievement of poverty indicators and Gini coefficients from 2012-2015 show that economic growth in Philippines has been pro-poor and able to reduce inequality.

**Figure 10 Poverty and Inequality Rate in the Philippines, 2010-2015**



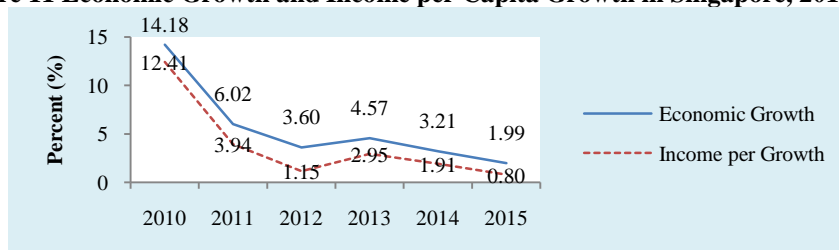
Source: The Family Income and Expenditure Survey 2015, Philippines

#### 4.1.5 The Inclusive Growth in Singapore

Singapore's economic growth has a steady downward trend from 2010 to 2015, while the growth per capita also follows at the lower levels. The absence of inclusive growth in Singapore has been attributed to slower per capita income growth compared to the economic growth. The gap between the two had widened considerably in 2012. This is due to the decline in global demand for services in Singapore following the economic shocks in America and Europe.

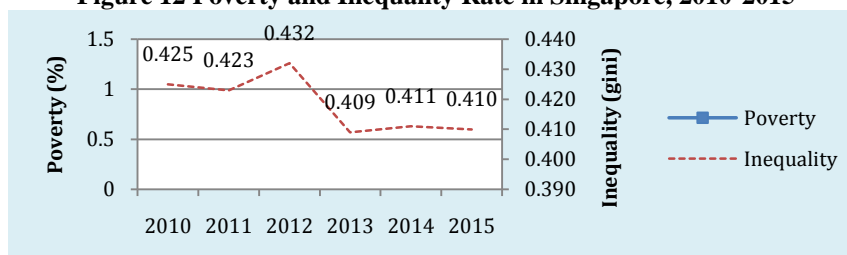
Singapore has the worst progress of inclusive growth coefficient record in ASEAN. The inclusive growth coefficient of 2010 of 0.124 fell drastically to 0.008 in 2015 (Table 4). The achievement of the Gini coefficient indicator from 2010-2015 is quite volatile indicating that economic growth in Singapore has not been consistently able to decrease inequality. While poverty indicators are not available enough to be analyzed.

**Figure 11 Economic Growth and Income per Capita Growth in Singapore, 2010-2015**



Source: World Development Indicators, World Bank

**Figure 12 Poverty and Inequality Rate in Singapore, 2010-2015**



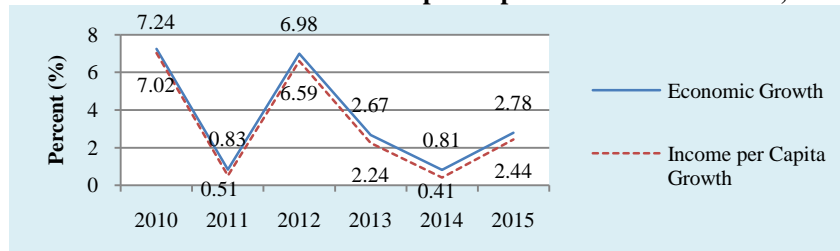


Source : Key Household Income Trends 2015, Singapore

#### 4.1.6 The Inclusive Growth in Thailand

Thailand's economic growth has a fluctuating trend from 2010 to 2015, while income per capita growth follows the level below. The gap between the two is very small and is the best in ASEAN, meaning that income per capita growth is able to keep pace with economic growth. In order to achieve inclusive growth, businesses that are not heavier than other countries in ASEAN are required.

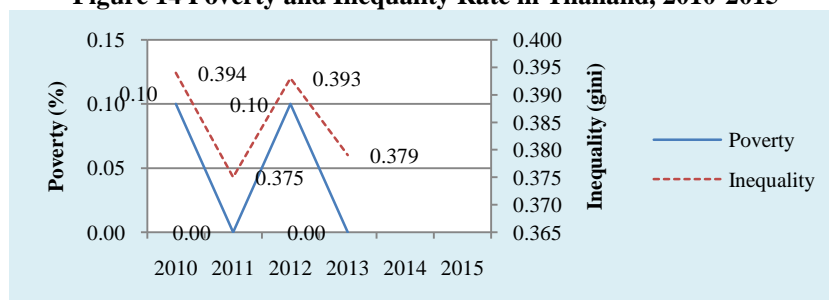
**Figure 13 Economic Growth and Income per Capita Growth in Thailand, 2010-2015**



Source: World Development Indicators, World Bank

The progress of the inclusive growth coefficient of Thailand in 2015 worsened compared to 2010, from 0.070 in 2010 to 0.024 in 2015 (Table 4). The achievements of poverty indicators and Gini coefficients from 2010-2013 are fluctuating, indicating that economic growth in Thailand has not consistently been able to reduce inequality. The poverty rate in Thailand in 2011 and 2013 is 0, which means no poor people have revenues below US \$ 1.9 per day.

**Figure 14 Poverty and Inequality Rate in Thailand, 2010-2015**

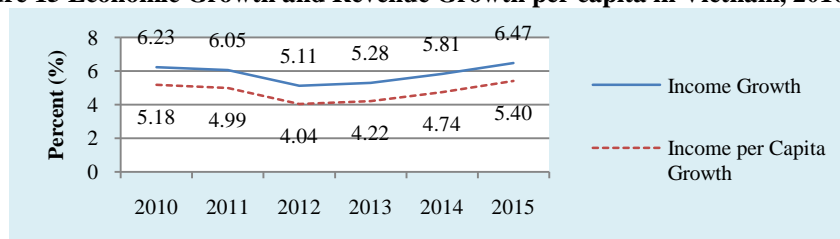


Source: Poverty & Equity Databank and PovcalNet, World Bank

#### 4.1.7 The Inclusive Growth in Vietnam

Vietnam's economic growth declined from 2010 to 2012, but then accelerated until 2015, while the growth per capita followed at the level below. Vietnam's economic progress is due to the industrial sector in Vietnam is beginning to experience a revival.

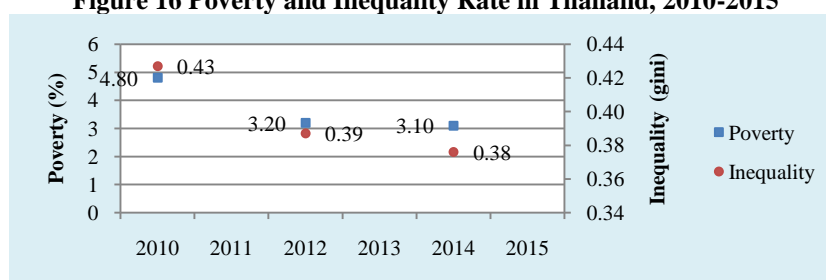
**Figure 15 Economic Growth and Revenue Growth per capita in Vietnam, 2010-2015**



Source: World Development Indicators, World Bank

The inclusive growth coefficient of Vietnam in 2015 has improved from 0.052 in 2010 to 0.054 in 2015 (Table 6). The achievement of poverty indicators and Gini coefficients from 2010-2014 shows that economic growth in Vietnam has been able to reduce poverty and inequality.

Figure 16 Poverty and Inequality Rate in Thailand, 2010-2015



Source: Poverty & Equity Databank and PovcalNet, World Bank

#### 4.2 Analysis of The Determinants of Inclusive Growth

The selection of the best model between Fixed Effect Model (FEM) and Common Effect Model (CEM) is done through FEM significance test with Chow test. Chow test shows F-count value of 12.15, while F-table value (0.05, 6, 26) is 2.47, F-count value > F-table value. Chow test through Redundant Fixed Test-Likelihood Ratio produces probability cross-section F of 0.00 which is smaller than  $\alpha = 0.01$ . Thus it is concluded that the test results reject the hypothesis H0 which means FEM is better than CEM. Hausman test can not be done because the Random Effect model can not be formed, it is caused by the number of the observations (n) which is smaller than the number of the variables used (k). In order to establish a Random Effect model, it is necessary to reduce the free amount used up to  $n > k$ , but it can not be done considering all the independent variables are necessary to deepen the analysis of the factors affecting inclusive growth.

The indication of multicollinearity in the model is not found. The value of R-squared is in the reasonable rate ( $R^2 = 0.8641$ ) and the eight variables inserted are significant in the model (the probability value t-statistic is smaller than  $\alpha = 0.1$ ). The next classical assumption test is heteroscedasticity test with Breusch-Pagan-Godfrey test which produces F-statistic probability and Chi-square probability is smaller than  $\alpha = 0.1$ , it means that in OLS model heteroscedasticity occurs. To overcome this, the model is transformed into GLS model that produces the final model which is fixed model effect with cross-section weighted.

The estimation results of the factors affecting inclusive growth resulted in a R-Squared score of 0.8641 indicating that variables included in the research model can explain inclusive growth of 86.41 percent, while the remains are explained by other variables. The value of F-Statistic Probability is 0.00 which is smaller than  $\alpha = 0.01$  which means that in the model, there is minimum one significant variable affecting inclusive growth.

If it is analyzed partially, according to Table 5, the eight independent variables used in the study have a significant effect on inclusive growth variables. There are five independent variables that have a positive coefficient (unidirectional with independent variables) and three independent variables that have negative coefficients (the opposite direction with independent variables). The influential variables are then described as supporting factors (positive coefficients) and inhibiting factors (negative coefficients) on inclusive growth.

Table 5 The Estimation Results of Factors Affecting Inclusive Growth

Variable	Coefficient		Probability
Log YPC	18.41	*	0.076
TO	0.06	***	0.006
CRD	-0.22	***	0.000
GOV	1.67	***	0.006
INV	0.47	***	0.003
INF	-0.19	**	0.039
FDI	0.69	***	0.000
REER	-0.09	**	0.021
Cons	-75.56	**	0.020
R-Squared			0.864
Adjusted R-Squared			0.791
F-Statistic			11.812
Prob (F-Statistic)			0.000

Description: \*\*\*, \*\*, \* significant at 1%, 5%, 10%

##### 4.2.1 The Effect of Income per Capita on Inclusive Growth

Table 5 shows that income per capita has a positive impact on inclusive growth and significant at a real level of 10%, meaning that an increase in income per capita will increase the percentage of inclusive growth. Research by Klasen (2010) also showed that the episodes that produce inclusive growth require several conditions, one of which is positive income growth per capita.

According to Ianchovichina and Gable (2012), economic growth is said to be inclusive if it is able to increase the size of the economy by increasing the income per capita. However, the addition of this measure should be

noted, how the composition of the income per capita increase that occurs in the poor and the rich. Economic growth will be increasingly inclusive if the percentage of increment that occurs in the poor is greater than the rich, which means an increase in the contribution of the poor to the total income of the entire population.

#### **4.2.2 The Effect of Trade Openness to Inclusive Growth**

Trade openness also contributes to inclusive growth. This variable is positively significant at a real 1% level, meaning that an increase in trade openness will spur inclusive growth. With international trade, people have more choice of service goods to be consumed at cheaper prices and the opening of export doors encourages domestic sectors to increase production to meet export needs. Similar research supporting this research was conducted by Wirapati and Kusumawardhani (2010) which suggested that in the short term, international trade can become a growth engine and promote poverty reduction.

On the other hand, Wirapati and Kusumawardhani (2010) also revealed that long-term trade openness would be detrimental especially for developing countries that do not have trade competitiveness. Given the results of different studies on the effects of trade openness for inclusive growth, it is necessary to deepen how the proportion of exports and imports to total trade. Of the 7 ASEAN countries studied, the value of Cambodian and Filipino imports is still dominant compared to the value of exports, namely the import share of 52-53 percent. The value of Indonesian imports in 2012-2014 is greater than the value of exports. The import reached 51-52 percent. The import value that exceeds export value will cause trade deficit which can disrupt the balance sheet of state finance, on the other hand it shows a high dependence on imported goods.

#### **4.2.3 The Effect of Government Consumption on Inclusive Growth**

Government expenditure has a positive and significant impact on inclusive growth at 1% level, which means that if the share of government expenditure to GDP increases, it can encourage inclusive growth. According to Seok's (2014), the greater government expenditure in education and public health sectors could reduce income inequality in developing Asian member countries.

Cambodia has a steady percentage of government expenditure to GDP from 2010-2015. This indicates the smaller fiscal role of the government in the economy. To accelerate the achievement of inclusive growth, Cambodia needs to increase government expenditure as an economic stimulus.

#### **4.2.4 The Effect of Investment and FDI on Inclusive Growth**

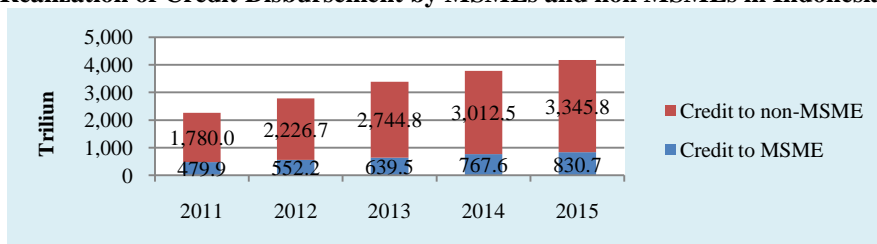
The variables that have a positive effect on inclusive growth are investment and FDI. Investment is significant at 1% real level while FDI is at 5% real level. This means that if the investment portion to GDP increases, it will increase the level of inclusive growth. In the economy, the improvements in both variables can create new employment opportunities and income-generating opportunities for households and ultimately spur the wheels of inclusive growth. Piotrowska (2016) reveals similarly, investment affects real GDP levels and real outputs and reduces poverty. The effect of investment on the private sector is stronger than the effect of investment on the public sector.

#### **4.2.5 The Effect of Credit on Inclusive Growth**

Table 5 shows that credit in private sector has a negative impact on inclusive growth and significant at a real 1% level, meaning that an increase in private sector credit portion to GDP can actually hinder the achievement of inclusive growth. Theoretically, credit in private sector will be the driving force of the economy with rapid growth, unfortunately the industrialization process that there is more directed to the industry on capital, so that employment opportunities for low-educated communities to be fewer, the effect actually further leads to inequality. Case studies in Indonesia conducted by OJK (2015) showed that sectoral credit can cause both positive and negative impacts depending on sectoral absorption of labor. Credit in the agricultural sector tends to have a positive impact on the economy, while credit in the manufacturing sector is likely to have a negative impact on the economy.

The ratio of credit distributed to MSMEs in Indonesia is about 20 percent from 2011 to 2015. This means that banking credit is mostly used by large companies that tend to be capital intensive and low in employment, especially uneducated and unskilled labor.

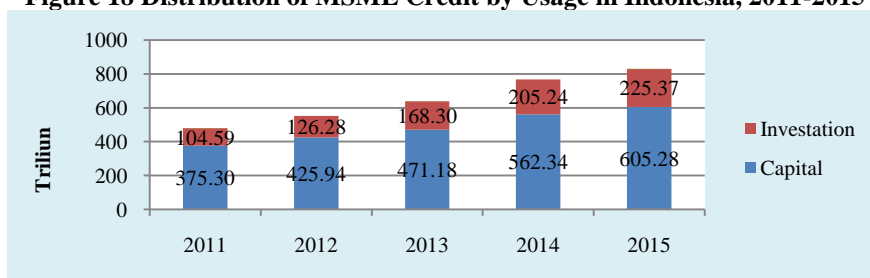
**Figure 17 Realization of Credit Disbursement by MSMEs and non MSMEs in Indonesia, 2011-2015**



Source: Bank Indonesia, 2016

If traced more deeply, the MSME credit is more widely used to finance working capital than for investment. That is, the credit given to MSMEs leads to short-term loans to expand the scale of existing businesses with capital expenditure. The use of credit for investment also needs to be increased as capital to expand business, purchase of fixed assets, and new business establishment to absorb more labor.

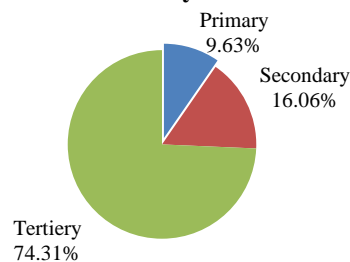
**Figure 18 Distribution of MSME Credit by Usage in Indonesia, 2011-2015**



Source: Bank Indonesia, 2016

If detailed according to the field of business, the MSME credit channeled in Indonesia is more utilized in tertiary sector (services) that have a tendency to absorb few labor. Utilization of credit for the primary sector (agriculture and mining) only reaches 9.63 percent, whereas this sector has a tendency to absorb many labors, especially uneducated and unskilled labor.

**Figure 19 Percentage of MSMEs Loans by Economic Sector in Indonesia, 2015**



Source: Bank Indonesia, 2016

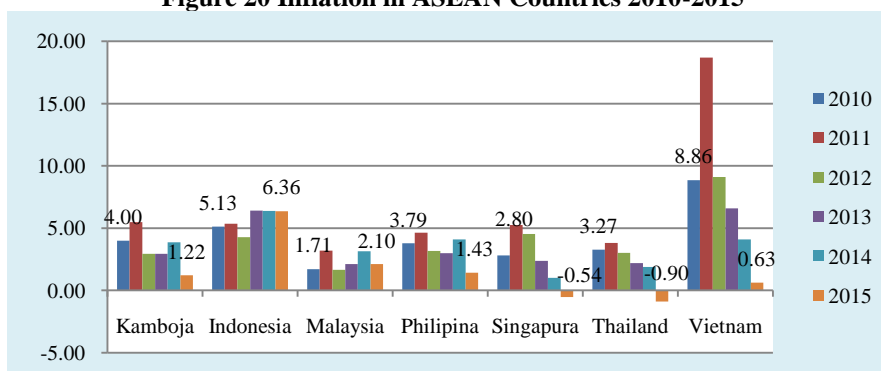
The credit channeling should be directed more towards MSME in the primary sector as the sector with the highest employment in order to support the inclusive growth.

**4.2.6 Influence of Inflation and REER on Inclusive Growth**

Inflation also has an adverse impact on achieving inclusive growth at a real 5%, meaning that higher inflation in ASEAN countries will further hamper inclusive growth. Anand et al. (2013) also stated that inflation has a negative impact on economic growth and level of equity.

The inflation rate in ASEAN countries during 2010-2015 is generally volatile, even in 2015, 3 countries namely Singapore, Thailand, and Vietnam experienced deflation caused by falling output prices in some sectors. In Singapore, deflation is caused by falling output prices for food, hospitality and land transportation (Bara, 2016). Meanwhile, inflation in Indonesia looks more stable than other countries in ASEAN. Although inflation is stable, but in the last two years (2014-2015) Indonesia's inflation is the highest in ASEAN with a range of 6.3-6.4 percent.

**Figure 20 Inflation in ASEAN Countries 2010-2015**



Source: World Bank, 2016

In international trade, competitiveness becomes the main capital for the state to be able to stand in line with other countries. A strong country in competitiveness can improve bargaining position and gain more profits from trade. According to Bank Indonesia, the increase in REER value reflects the decline of the trade competitiveness of a country against other countries. At a real 5% level, REER has a negative and significant effect on inclusive growth, meaning that the higher the REER value, the more difficult the inclusive growth to achieve. REER is in line with inflation, If the exchange rate is more depreciated against the value of US \$ currency, then the competitiveness of trade will increase with the price of cheaper export goods (REER goes down). In the long term, these conditions will have a positive impact on economic growth (Abida, 2010).

## V. CONCLUSION AND SUGGESTIONS

### 5.1 Conclusion

1. The economic growth of ASEAN countries during the period of 2010 to 2015 has not been inclusive. Economic growth has not been able to create income distribution for all community groups. Countries that have improved progress in 2015 compared to 2010 are Cambodia and Vietnam, while the other 5 countries are deteriorating. In the last 5 years, inequality in Indonesia has increased, while six other countries managed to reduce inequality even though some still experience fluctuations.
2. The factors supporting inclusive growth are income per capita, trade openness, government expenditure, domestic investment, and foreign direct investment. While the factors that hamper inclusive growth are private sector credit, inflation, and real effective exchange rate (REER).

### 5.2 Suggestion

The Governments need to implement policies to achieve inclusive growth as follows:

1. The government spending still seems to have an important role to achieve inclusive growth in ASEAN countries. Therefore, the government needs to increase the fiscal stimulus to the economy with the aim of reducing poverty and equitable distribution of income
2. Opens the investment opportunities for both domestic investors and foreign investors who are direct investments to open the business field, create job opportunities, and provide opportunities for people to earn income and increase income per capita.
3. Control inflation and exchange rate through monetary policy in order to avoid fluctuations that can harm the economy.
4. The government needs to direct the channeling of bank credit in high-employment sectors such as agriculture and MSMEs, in order to support the achievement of inclusive growth

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## APPENDIX

### Appendix 1 Coefficient of Inclusive Growth in ASEAN Countries, 2010-2015

Negara	2010	2011	2012	2013	2014	2015
Indonesia	0.047	0.047	0.045	0.041	0.036	0.035
Cambodia	0.043	0.052	0.054	0.056	0.052	0.052
Malaysia	0.055	0.036	0.038	0.031	0.043	0.034
Philippine	0.058	0.020	0.049	0.052	0.044	0.041
Singapore	0.124	0.039	0.012	0.030	0.019	0.008
Thailand	0.070	0.005	0.066	0.022	0.004	0.024
Vietnam	0.052	0.050	0.040	0.042	0.047	0.054

Source : World Indicator Development, World Bank (processed)

### Appendix 2 Panel Data Estimation Results Factors Influencing Inclusive Growth with Fixed Effect Model

Dependent Variable: IG  
 Method: Panel EGLS (Cross-section weights)  
 Linear estimation after one-step weighting matrix

Variable	Coefficient	Std. Error	t-Statistic	Prob.
C	-75.55693	30.45303	-2.481098	0.0199
LOGYPC	18.41319	9.975574	1.845827	0.0763
TO	0.062714	0.021001	2.986252	0.0061
CRD	-0.222363	0.033218	-6.693980	0.0000
GOV	1.672549	0.563966	2.965693	0.0064
INV	0.472558	0.143263	3.298545	0.0028
INF	-0.187057	0.086092	-2.172751	0.0391

*Achievements And Determinants Of Inclusive Growth In Asean Countries*

FDI	0.689144	0.152742	4.511815	0.0001
REER	-0.089508	0.036483	-2.453402	0.0212
Effects Specification				
Cross-section fixed (dummy variables)				
Weighted Statistics				
R-squared	0.864139	Mean dependent var	4.881544	
Adjusted R-squared	0.790982	S.D. dependent var	2.843487	
S.E. of regression	1.103452	Sum squared resid	31.65776	
F-statistic	11.81224	Durbin-Watson stat	2.747097	
Prob(F-statistic)	0.000000			
Unweighted Statistics				
R-squared	0.790934	Mean dependent var	4.258345	
Sum squared resid	34.44768	Durbin-Watson stat	2.906590	

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