



## Inclusive Economic Growth of Indonesia and Its Determinants-Recent Evidence with Provincial Data

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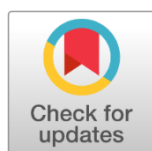
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**Abstract:** This study evaluates Indonesia's achievement in inclusive economic growth by analyzing regional data from 34 provinces for the period 2016-2018. For that purpose, the study used three indicators of achieving inclusive economic growth, namely economic growth that reduces inequality, poverty, and unemployment (or increases employment), the Poverty-Equivalent Growth Rate (PEGR) method, and the technique of multiple linear regression analysis (i.e. the fixed effect model). This study's results indicate that economic growth in Indonesia is not yet fully inclusive. Only a few provinces that have achieved inclusive growth. It was found that access to technology represented by the percentage of households owning a computer and access to energy represented by the percentage of households using LPG as the main fuel for cooking have positive effects on the acceleration of inclusive economic growth. in Indonesia.

**Keywords:** Inclusive economic growth, inclusive growth index, poverty, employment, inequality

### Introduction

According to Ali and Zhuang (2007), Ali and Son (2007), and Rauniyar and Kanbur (2009), the term "inclusive economic development" has no widely accepted definition. The concept clearly encompasses inclusion and economic development, and views inclusion as a process as well as a goal. Such as Sen (1999), Sachs (2004), Ali and Son (2007), Rauniyar and Kanbur (2009), and McKinley (2010) stress that inclusive economic development is economic growth coupled with equal economic opportunities. It focuses on creating economic opportunities and making them accessible to everyone in society at all levels, not just to the poor. In the same way, inclusive economic growth is one

that emphasizes economic opportunities created by economic growth are freely available to all, particularly the poor (Tambunan, 2012, 2015).

Inclusive economic growth has a number of elements, which includes poverty reduction, employment generation, improvement in quality of employment, agriculture development, industrial development, social sector development, reduction in regional disparities, environment protection, and equal distribution of income. Among these elements, poverty reduction, employment creation and equal distribution of income have received the most attention in empirical studies of, explicitly or implicitly, inclusive economic growth (Alesina and Rodrik, 1994; Barro, 2000; Bourguignon,

2003; Commission on Growth and Development, 2008; OECD, 2008; World Bank, 2008; Prabandari, 2018).

In Indonesia, many reforms have been carried out since the 1997-98 Asian financial crisis. The government has embarked upon institutional transformation, making the country one of the region's most vibrant democracies. In the social, economic, and political fields, Indonesia has seen much progress. Wide reforms have been carried out in all areas of governance, including in the financial sector, and a new development strategy has been adopted for "inclusive" economic development (Tambunan, 2012, 2015).

## Aim and Research Problems

This study is part of ongoing research project on "Inclusive Development in Indonesia". The aim of this study is to evaluate Indonesia's achievement in inclusive economic growth by analyzing regional data from 34 provinces. The definition of inclusive economic growth used in this study is growth that reduces poverty, income distribution inequality and unemployment.

This research focuses on the following three questions:

1. Is Indonesia successful in achieving inclusive economic growth?
2. Are there differences in achieving inclusive economic growth between provinces?
3. What factors most determine the achievement of inclusive economic growth in 34 provinces?

## Determinant Factors

Until now there has not been so much research on inclusive growth at the provincial level in Indonesia. From very few empirical

studies that the authors managed to find, there is only one study, namely from Sholihah (2014) who conducted an empirical research in 34 provinces for the 2008-2012 period. The result shows that in 2008 only a few provinces showed inclusive growth, whereas during the 2009-2012 period none of the provinces experienced inclusive growth. While other studies only examined one or a few provinces. Table 1 shows previous studies in Indonesia.

Because poverty and inequality are the two most important indicators in measuring the inclusiveness of an economic growth (Anand and Sen, 2000; Bavinck et al, 2013; Rauniyar and Kanbur, 2010; Sen, 2010; UNDP, 2010; ADB, 2007, 2008, 2012; OECD, 2015), so automatically the factors that directly influence poverty and inequality become important variables in analyzing inclusive economic growth. These factors are (i) access to education and healthcare (e.g Arsyad, 1999; Suhkre et al., 2005; Suryawati, 2007; Habito, 2009; Rauniyar and Kanbur, 2010; Abosedo and Onakoya, 2013; Sholihah, 2014; Oxfam, 2014a,b; Gupta et al., 2015; Azwar, 2016; Tambunan, 2016; Green et al., 2017; Prabandari, 2018; Cahyadi et al., 2018; Doumbia, 2018; Sukwika, 2018); (ii) access to capital/financing (e.g Habito, 2009; Singh, 2012; Sanjaya, 2014; Babajide et al., 2015; Khan et al., 2016); (iii) employment and business opportunities (e.g Thorbecke, 2006; Ali 2007; Ali and Zuang, 2007; ADB, 2007, 2008; Tandon and Zhuang, 2007; World Bank 2008, 2009; McKinley, 2010; Green et al., 2017); (iv) access to technology (e.g Soni, 2007; Sholihah, 2014; Sanz, 2015; Prasetyo & Sutopo, 2018); (v) access to market (e.g OECD, 2011; Gupta et al., 2015); (vi) access to raw materials (e.g Climate Commission, 2013; Gupta et al., 2015); (vii) access to physical infrastructure as well as non-physical infrastructure or economic infrastructure such as information and communication technology (e.g McKinley, 2010; Maryaningsih et al., 2014; Sukwika, 2018); (viii) gender equity (e.g Narayan et al, 2000; Niimi, 2009; Rauniyar and

Kanbur, 2010; UNRISD, 2013); and (ix) access to energy (e.g Gupta et al., 2015). Access to all

sources of poverty reduction accelerates the achievement of inclusive economic growth.

**Table 1.** Previous Empirical Studies in Indonesia

No	Name, Year and Title	Research Variables	Model used	Conclusion
1	Sholihah, 2014 Inclusive Growth: Factors Affecting and Its Impact on income growth of Middle Class in Indonesia	-Per capita income -Government investment in physical capital -School participation rate -Physical capital -Inequality -Agricultural sector contribution -Inflation -Population -Economic growth -Unemployment	Panel & Poverty-Equivalent Growth Rate (PEGR)	The study was conducted in 34 provinces in Indonesia in 2008-2012. It concludes that economic growth in Indonesia in 2008-2012 was not inclusive. In 2008, only the Special Region of Yogyakarta (DIY) and the province of West Papua experienced inclusive growth. In 2010, NTT, NTB, West Kalimantan, Central Kalimantan, East Kalimantan and South Sulawesi were provinces that experienced inclusive growth. In 2009 and 2012 none of the provinces experienced inclusive growth.
2	Azwar, 2016 Inclusive Growth in South Sulawesi Province and the Factors Affecting it	-Health -Regional spending -Economic growth -Unemployment -Education -Population	Social Mobility Curve, PEGR and Panel and regional	Factors affected inclusive growth in South Sulawesi Province were health expenditure factors that have positive influences. Other factors such as unemployment, education, and population have negative influences on inclusive economic growth in South Sulawesi Province
3	Prabandari, 2018 Analysis of the Inclusion of Economic Growth in of East Java and the Factors Affecting it	-Productive land -Labor -Investment -Income per capita -Education budget -Health budget -Average duration of School	PEGR and Panel	During the period 2011-2015 the inclusive growth index in East Java had a declining trend. In this province, three aspects of economic growth were more dominant than other aspects, namely inequality, poverty and unemployment. Management of resources that can increase income per capita influenced the acceleration of the realization of inclusive growth in East Java. The role of the Government of East Java Province through fiscal policy, in this case is the education and health budget, was found effective in accelerating the realization of inclusive growth.
4	Cahyadi et al., 2018 Inclusive growth and leading sector in Bali Province		. PEGR	In general, regions with an agricultural basis tended to have pro-poor growth in reducing inequality but had anti-pro-poor growth in labor absorption. Meanwhile, areas with high tourism potential have anti-pro-poor growth in reducing poverty and inequality. However, it has pro-poor growth in employment.

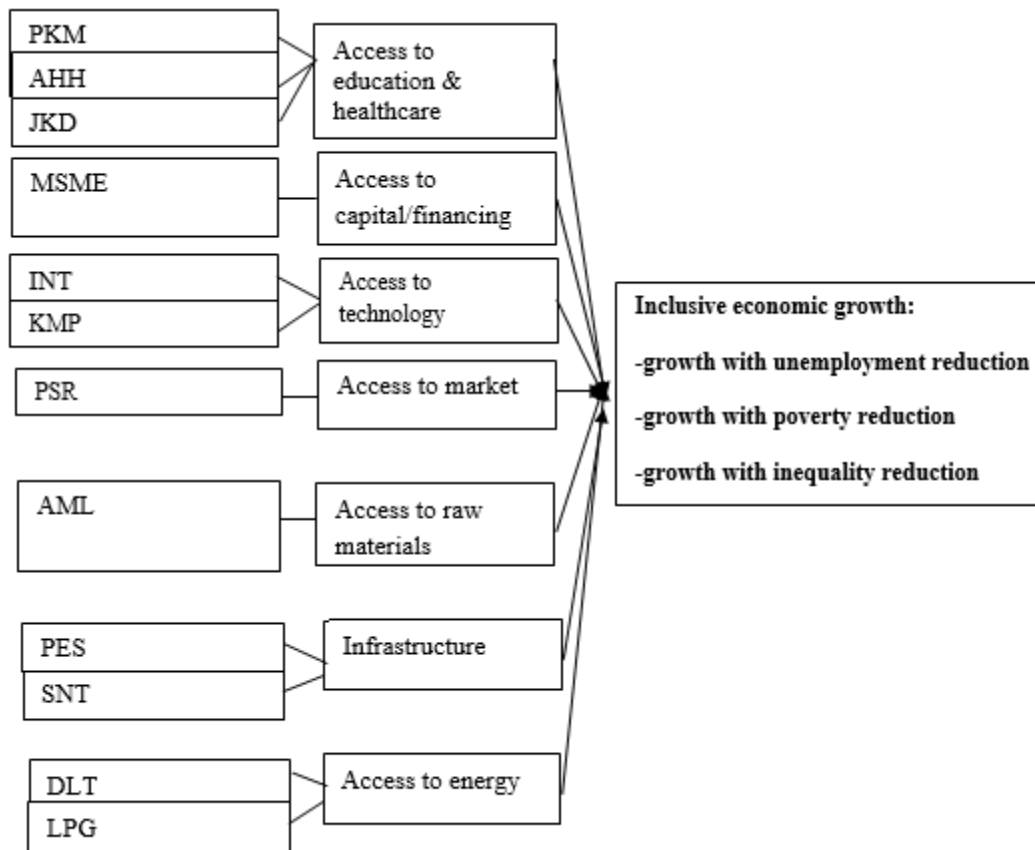


Figure 1. Theoretical framework

## Theoretical Framework and Hypotheses

Theoretically, there are two key channels through which economic growth affects employment and hence poverty and inequality, namely stronger output growth and increasing labor productivity in labor-intensive sectors (e.g. Tang, 2008; World Bank, 2008; Habito, 2009). In developing countries including Indonesia these sectors are agriculture, middle to low technology-based industries such as textile and garments, footwear, leather, furniture, tobacco, electronics, and food and beverages, and trade.

However, from the literature review it revealed that for an economic growth to be inclusive is influenced by many factors. In this study, as illustrated in Figure 1, 13 factors are included in the analysis of inclusive growth (IG), namely school participation rate (APS), number of community health centers (PKM), life expectancy (AHH), regional health

insurance (JKD), credit outstanding of micro, small and medium enterprise (MSME), percentage of households that own a computer (KMP), percentage of households accessing the internet (INT), number of local traditional markets (PSR), length of national roads (PES), percentage of households that have access to proper sanitation (SNT), percentage of households that have access to clean water (AML), electricity (DLT), and percentage of households that use liquified petroleum gas as main fuel for cooking (LPG).

Based on the theoretical framework, this research developed two hypotheses as follows:

H1: not all provinces in Indonesia achieved inclusive growth

H2: all determinants have a positive and significant impact on inclusive growth.

## Research Method and Data Sources

The model and techniques of analysis used in this study differ according to the hypothesis being tested. For H1, the analysis model used was the Poverty-Equivalent Growth Rate (PEGR) formula adopted from several previous similar studies conducted by, among others, [Klasen \(2010\)](#), [Sholihah \(2014\)](#), [Azwar \(2016\)](#), and [Prabandari \(2018\)](#). PEGR is often used to measure the benefits of economic growth for the poor. By adopting the PEGR concept, inclusive growth can be measured by the following formula:

$$IG_{ij} = (E_{ij}/E_i) \times \hat{E}_j \quad (1)$$

where:  $IG_{ij}$  = inclusive growth coefficient.  $E_{ij}$  = growth of group  $i$  in relation to indicator  $j$ ,  $E_j$  = growth of indicator  $j$ .

By describing  $i$  from equation (1) as poverty ( $p$ ), inequality ( $in$ ) and labor ( $em$ ), and  $j$  refers to indicators of economic growth ( $g$ ), then by adopting the equation, inclusive growth can be measured by the following formula:

- a) Inclusive growth index that reduces poverty ( $IG_p$ ) with the following formula:

$$IG_p = (E_{pg}/E_p)\hat{G}_g \quad (2)$$

- b) Inclusive growth index that reduces inequality ( $IG_{in}$ ) with the following formula:

$$IG_{in} = (E_{in,g}/E_{in})\hat{G}_g \quad (3)$$

- c) Inclusive economic growth index in absorbing labor ( $IG_{em}$ ) with the following formula:

$$IG_{em} = (E_{em,g}/E_{em})\hat{G}_g \quad (4)$$

where:

$IG_p$  = inclusive growth coefficient in reducing poverty

$IG_{in}$  = inclusive growth coefficient in reducing inequality

$IG_{em}$  = inclusive growth coefficient in absorbing labor

$E_p$  = poverty elasticity of average income

$E_{pg}$  = poverty elasticity of economic growth

$E_{em,g}$  = employment elasticity of economic growth

$E_{em}$  = employment elasticity of average income

$E_{in}$  = inequality elasticity of average income

$E_{in,g}$  = inequality elasticity of economic growth

$\hat{G}_g$  = economic growth.

IG index in this study is the average of the three inclusive economic growth indices combined, so that:

$$IG = (IG_{in} + IG_p + IG_{em})/3 \quad (5)$$

An economic growth can be said to be inclusive if the value of  $IG \geq \hat{G}_g$

For H2, the technique of multiple linear regression analysis was used. In this determinant analysis, the dependent variable is inclusive growth using index values or inclusive growth coefficients and the 13 determinants as independent variables. In a multiple linear regression classic assumption tests were performed which aimed to obtain the results of a regression estimate that meets the best linear unbiased estimator requirements, which are linear, unbiased, and minimum variables, namely, normality test, heteroscedasticity test, autocorrelation test and multicollinearity test.

In accordance with the variables and research objectives, an empirical linear regression model can be formulated according to the inclusive growth indicator approach (the results of the PEGR analysis), as shown by equation 6, and definition of operational variables is given in Table 2.

$$IG_{it} = \alpha_0 it + \alpha_1 APS_{it} + \alpha_2 PKM_{it} + \alpha_3 AHH_{it} + \alpha_4 JKD_{it} + \alpha_5 UMKM_{it} + \alpha_6 KMP_{it} + \alpha_7 INT_{it} + \alpha_8 PSR_{it} + \alpha_9 PJJ_{it} + \alpha_{10} SNT_{it} + \alpha_{11} AML_{it} + \alpha_{12} DLT_{it} + \alpha_{12} LPG_{it} + e_{1it} \quad (6)$$

This study used panel data or cross section data of 34 provinces for 2016, 2017 and 2018 from two sources, namely [Bappenas \(2018\)](#) for PKM variable, and the Central Statistics Agency ([BPS, 2015a,b; 2016; 2017; 2018a,b,c; 2019a,b,c,d,e](#)) for the remaining independent variables. Ideally, a dynamic model over a longer time period would be more appropriate. However, for other years, not all provinces have data for all variables.

## Findings

### *Economic Growth, Poverty, Inequality, Unemployment*

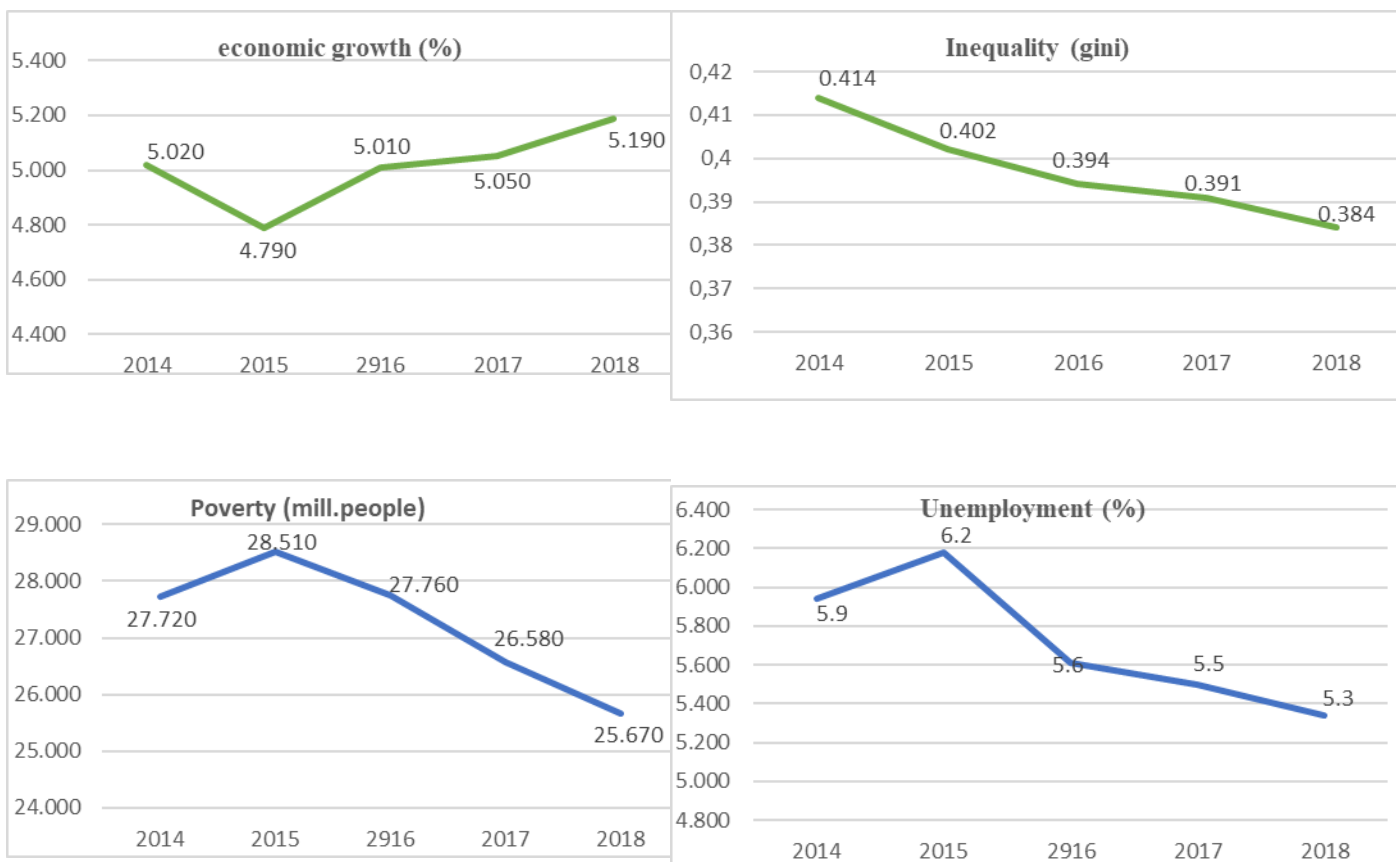
Since the end of the 1998 Asian financial crisis that forced the Indonesian economy to drop sharply with a growth rate of

minus 13 per cent, Indonesia's economic growth rate has never exceeded 5.5 per cent compared to an average of 7 to 8 per cent that ever achieved before the crisis. However, looking at the development of the three main components of inclusive growth, it seems that Indonesia is on the right track towards inclusive growth. As can be seen in Figure 2, the level of inequality tends to decline; although it is not significant and still falls into the category of moderate inequality. Indeed, reducing inequality remains a serious problem in Indonesia which has not been easy to overcome. This may suggest that more government efforts are still needed to achieve inclusive growth. The number of poor people and the level of unemployment also shows a declining trend.

**Table 2.** Definition of Operational Variables

Factors that Affect Inclusive Growth	Variable	Definitions and Variable Units
(1)	(2)	(3)
Access to education & healthcare	APS	the percentage of children in a particular school age group who are attending school at an age appropriate to their age to the total number of children in the school age group concerned.
	AHH	the average number of years a person will live since that person was born
	PKM	total availability of community health center units in unit
	JKD	assistance program for payment of health services provided by local governments in million Rupiah
Access to capital	MSME	principal balance of the loan ceiling agreed in the credit agreement in million Rupiah
Access to technology	KMP	the percentage of households that have computer
	INT	the percentage of households that has access to the internet
Access to market	PSR	a place where people conduct trading activities in units
Access to raw materials	AMI	the percentage of households that have access to clean water

Infrastructure	PES	the length of any road that is open to public vehicle traffic in kilometers (km)
	SNT	percentage of households that have access to proper sanitation
Access to energy	DLT	electricity flow from the electricity transmission system to the consumer (giga watt per hour/GWh)
	LPG	percentage of households that use liquified petroleum gas as main fuel for cooking



Source: Statistik Indonesia, BPS, various years

Figure 2. Economic Growth, Inequality, Poverty, and Unemployment in Indonesia during 2014-2018

Economic growth in a region can be said to be inclusive if its inclusive growth index (IG) is greater or equal to its economic growth ( $\hat{G}$ ). The results show that in 2017 and 2018 IG is below the economic growth rate although the inclusive economic index grew much faster (39%) than the increased

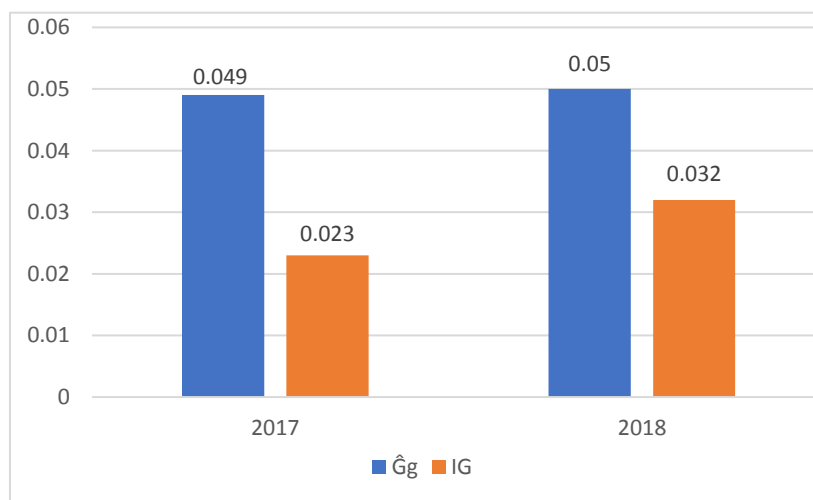
economic growth rate (2%) during that period (Figure 3). This means that Indonesia's economic growth is not inclusive yet because only a few provinces have achieved inclusive growth during that period. Of the 68 observations (34 provinces in 2017 and 2018),

only 8 observations that achieved inclusive growth.

Meanwhile, as shown in Table 3, economic growth, poverty, open unemployment and inequality vary by province. To some degree, these variations reflect differences in many growth factors between provinces including the availability of resources, the average level of education of the workforce, economic structure, and infrastructure development. In 2018, the highest economic growth was achieved by Papua and West Papua ranked second. Their high growth rates were influenced greatly by the wealth of their natural resources, especially mining such as copper, gold, oil and gas.

### *Inclusive Growth Index*

As already explained in the methodology, in this study three coefficients of the inclusive growth index were analyzed using provincial data. First, the coefficient of economic growth that reduces poverty. Economic growth is said to be inclusive if the  $IG_p$  coefficient is greater or equal to the  $G_g$  coefficient. Second, the coefficient of economic growth that reduces inequality. Economic growth is inclusive if the  $IG_{in}$  coefficient is greater or equal to the  $G_g$  coefficient. Third, the coefficient of economic growth that increases labor absorption. Economic growth is considered inclusive if the  $IG_{em}$  coefficient is greater or equal to the  $G_g$  coefficient.



**Figure 3.** Average Inclusive Growth Index in Indonesia

**Table 3.** Economic Growth, Poverty, Inequality, and Unemployment by Province in 2017 and 2018

Province	Economic growth		Poverty (%)		Inequality (gini ratio)		Unemployment (%)	
	2017	2018	2017	2018	2017	2018	2017	2018
Papua	4.78	8.25	27.76	27.43	0.398	0.398	3.62	3.20
West Papua	6.32	7.69	23.12	22.66	0.387	0.391	6.49	6.30
North Maluku	8.3	7.59	6.44	6.62	0.33	0.336	5.33	4.77
Maluku	5.11	7.39	18.29	17.85	0.321	0.326	9.29	7.27
West Sulawesi	6.54	7.25	11.18	11.22	0.339	0.366	3.21	3.16
Gorontalo	7.79	6.47	17.14	15.83	0.405	0.417	4.28	4.03



South Sulawesi	7.74	6.41	9.48	8.87	0.429	0.388	5.61	5.34
Southeast Sulawesi	6.08	6.41	11.97	11.32	0.404	0.392	3.30	3.26
Central Sulawesi	9.12	6.23	14.22	13.69	0.345	0.317	3.81	3.43
North Sulawesi	6.53	6.12	7.9	7.59	0.394	0.372	7.18	6.86
North Kalimantan	7.04	6.1	6.96	6.86	0.313	0.304	5.54	5.22
East Kalimantan	1.62	6.07	6.08	6.06	0.333	0.342	6.91	6.60
South Kalimantan	4.46	5.98	4.7	4.65	0.347	0.34	4.77	4.50
Central Kalimantan	5.28	5.78	5.26	5.1	0.327	0.344	4.23	4.01
West Kalimantan	5.81	5.65	7.86	7.37	0.329	0.325	4.36	4.26
West Nusa Tenggara	0.61	5.5	15.05	14.63	0.378	0.391	3.32	3.72
East Nusa Tenggara	5.29	5.5	21.38	21.03	0.359	0.359	3.27	3.01
Bali	4.01	5.48	4.14	3.91	0.379	0.364	1.48	1.37
Aceh	3.55	5.43	15.92	15.68	0.329	0.318	6.57	6.36
Banten	5.82	5.38	5.59	5.25	0.379	0.367	9.28	8.52
East Java	5.76	5.37	11.2	10.85	0.415	0.371	4.00	3.99
Central Java	5.4	5.32	12.23	11.19	0.365	0.357	4.57	4.51
D.I.Yogyakarta	5.26	5.32	12.36	11.81	0.44	0.422	3.02	3.35
West Java	5.45	5.3	7.83	7.25	0.393	0.405	8.22	8.17
DKI Jakarta	5.84	5.28	3.78	3.55	0.409	0.39	7.14	6.24
Kep. Riau	2.56	5.14	6.13	5.83	0.359	0.339	7.16	7.12
Kep. Bangka Belitung	2.91	5.07	5.3	4.77	0.276	0.272	3.78	3.65
Lampung	5.3	4.77	13.04	13.01	0.333	0.326	4.33	4.06
Bengkulu	4.59	4.76	15.59	15.41	0.349	0.355	3.74	3.51
South Sumatra	5.97	3.7	13.1	12.82	0.365	0.341	4.39	4.23
Jambi	5.2	1.28	7.9	7.85	0.334	0.335	3.87	3.86
Riau	2.53	0.18	7.41	7.21	0.325	0.347	6.22	6.20
West Sumatra	5.41	-1.43	6.75	6.55	0.312	0.305	5.58	5.55
North Sumatra	5.56	-17.79	9.28	8.94	0.335	0.311	5.60	5.56
<b>Indonesia</b>	<b>5.22</b>	<b>5.05</b>	<b>10.12</b>	<b>9.66</b>	<b>0.391</b>	<b>0.384</b>	<b>5.50</b>	<b>5.34</b>

Sources: BPS (2015a; 2016; 2017; 2018a,b; 2019b,c,d,e)

With respect to poverty, the results show that in 2017 only four provinces had achieved inclusive growth and increased to seven provinces in 2018 (Table 4). It is obvious that most provinces in Indonesia have economic growth that is not yet inclusive in reducing poverty. Their  $IG_p$  coefficient is positive but smaller than their  $G_g$  coefficient, meaning that poverty continued to decrease, but only a small portion of the poor did benefit from the growth. North Kalimantan, the newest province in Indonesia, has negative coefficients in both years. This means that economic growth was enjoyed by people who were not poor (anti poor). A negative coefficient also indicates that economic growth cannot explain its role in reducing poverty, and even tends to exacerbate poverty.

**Table 4. Economic Growth and Inclusive Growth by Province, 2017-2018**

Province	Period			
	2017		2018	
	IG	Gg	IG	Gg
Aceh	0.02	0.04	0.03	0.05
North Sumatra	0.04	0.05	0.04	0.05
Riau	0.01	0.03	0.03	0.02
Jambi	0.01	0.05	0.04	0.05
South Sumatra	0.01	0.05	0.03	0.06
Bengkulu	0.01	0.05	0.04	0.05
Lampung	0.01	0.05	0.04	0.05
Kep. Bangka Belitung	0.00	0.04	0.05	0.04
Kep. Riau	0.02	0.02	0.02	0.04
DKI Jakarta	-0,01	0.06	0.03	0.06
West Java	0.04	0.05	0.04	0.05
Central Java	0.03	0.05	0.03	0.05
DI Yogyakarta	0.02	0.05	0.03	0.06
East Java	0.03	0.05	0.03	0.05
Banten	0.01	0.06	0.03	0.06
Bali	0.01	0.05	0.03	0.06
West Nusa Tenggara	0.01	0.00	0.00	-0,05
East Nusa Tenggara	0.03	0.05	0.03	0.05
West Kalimantan	0.01	0.05	0.04	0.05

Central Kalimantan	0.01	0.07	0.05	0.05
South Kalimantan	0.02	0.05	0.03	0.05
East Kalimantan	0.00	0.03	0.03	0.03
North Kalimantan	-1.76	0.07	-17,23	0.06
North Sulawesi	0.00	0.06	0.04	0.06
Central Sulawesi	0.00	0.07	0.03	0.06
South Sulawesi	0,01	0.07	0.04	0.07
Southeast Sulawesi	0.00	0.07	0.03	0.06
Gorontalo	0.02	0.07	0.04	0.06
West Sulawesi	0.01	0.06	0.04	0.06
Maluku	0.00	0.06	0.04	0.06
North Maluku	0.02	0.07	0.03	0.08
West Papua	0.03	0.04	0.04	0.06
Papua	0.04	0.05	0.03	0.07

With respect inequality, in 2017 there were four provinces that had achieved inclusive growth, i.e. Kep province. Riau, West Nusa Tenggara, West Papua and Papua and increased in 2018 to six provinces, i.e. Riau, Jambi, Kep. Bangka Belitung, West Java, West Nusa Tenggara and East Kalimantan. Kep Riau, Papua and West Papua failed to maintain their inclusive growth in 2018. Whereas the province of West Nusa Tenggara was able to maintain its inclusive growth in reducing inequality for two years in a row.

Regarding employment or unemployment, in 2017 there were five provinces that have achieved inclusive growth in increasing employment, i.e. North Sumatra, Kep. Riau, West Java, East Java and North Kalimantan, and increased in 2018 to seven provinces, i.e. North Sumatra, Riau, Kep. Bangka Belitung, Central Kalimantan, East Kalimantan, Gorontalo and Maluku.

Overall, the number of provinces with inclusive growth increased between from only 2 in 2017 to 4 in 2018. North Kalimantan was

the only province that experienced a drop in IG from -1.76 in 2017 to -17.23 in 2018. This was mainly due to a significant decline of  $IG_p$  from -5.44 in 2017 to -51.76 years 2018.

Next, Chow test and Hausman test were performed to determine the panel model to be used, and the results show that the probability value of Chi-Square is smaller than 0.05. This means that a more appropriate model to be used to estimate the effect of independent

variables on IG is the fixed effect model. The estimation results are as follows:

$$\begin{aligned}
 IG_{it} = & 0,083799 + 0,009339APS + \\
 & 0,105092\ln PKM + (0,035748)AHH + \\
 & 0,001071JKD + (0,076630)\ln UMKM + \\
 & (0,009991)KMP + 0,000747INT + \\
 & (0,005871)\ln PSR + 0,147089\ln PJJL + \\
 & 0,000132SNT + 0,001535AML + 0,015971DLT \\
 & + 0,006703LPG \quad (7)
 \end{aligned}$$

**Table 5.** Fixed Effect Estimation Results

Variable	Coefficient	Std. Error	t-Statistic	Prob.
C	0.118414	3.720069	0.031831	0.9749
LPG	0.006703	0.002569	2.609054	0.0164
LNDLT	0.015971	0.019689	0.811175	0.4264
SNT	0.000132	0.001957	0.067576	0.9468
AML	0.001535	0.002305	0.665836	0.5128
LNPJJL	0.147089	0.204421	0.719541	0.4797
LNPSR	-0.005871	0.011634	-0.504619	0.6191
INT	0.000747	0.000880	0.848918	0.4055
KMP	-0.079991	0.004619	-2.163198	0.0422
LNUMKM	-0.076630	0.103327	-0.741626	0.4665
JKD	0.001071	0.000997	1.074056	0.2950
LNPKM	0.105092	0.058352	1.801000	0.0861
AHH	-0.035748	0.051418	-0.695237	0.4945
APS	0.020845	0.020845	0.447996	0.6587
<b>Effects Specification</b>				
<b>Cross-section fixed (dummy variables)</b>				
R-squared	0.870438	Mean dependent var	0.027571	
Adjusted R-squared	0.586635	S.D. dependent var	0.029865	
S.E. of regression	0.019201	Akaike info criterion	-4.860343	
Sum squared resid	0.007742	Schwarz criterion	-3.326271	
Log likelihood	212.2516	Hannan-Quinn criter.	-4.252496	
F- statistic	3.067048	Durbin-Wats	3.885714	
Prob(F-statistic)	0.003509			

Finally, two tests were carried out, namely the individual parameter significance test (t-test) to see whether each of these independent variables individually affected IG significantly, and the simultaneous significance test (F-test) to see whether all of these independent variables together affected IG significantly (Table 5). The results of the t-test show that there are only two variables whose probability value is smaller than 0.05, which means that each of them significantly affect the IG, namely the percentage of households that own computer and the percentage of households that use LPG as fuel for cooking. While the F-test results show a probability value smaller than 0.05, which means that together all these independent variables have a significant effect on IG.

## Conclusion and Research Limitation

There are two important findings from this research. First, although at the national level poverty, inequality and unemployment continued to decline, the economic growth in Indonesia is not yet fully inclusive. The average inclusive growth index in Indonesia is still below the average economic growth. Meanwhile the achievement of inclusiveness at the regional level shows different results between provinces. However, looking at the average index value of inclusive growth, at least during the 2016-2018 period, IG Indonesia shows an upward trend. In 2017 the provinces that had experienced inclusive growth were Kep Riau and West Nusa Tenggara, and in 2018 were Kep. Bangka Belitung, West Nusa Tenggara, East Kalimantan and Riau. So, it can be concluded that Indonesia is well in a good track.

Second, the percentage of households that own computer that represents households' access to technology and the percentage of households that use LPG gas as the main fuel for cooking that represents their access to energy are two factors that have

strong influences in accelerating the realization of inclusive growth in Indonesia.

However, this research has some limitations which are the followings:

i) this study only used thirteen variables, i.e school participation rate, number of Puskesmas, life expectancy, regional health insurance, road length, number of traditional markets, number of households that own computers, users of the Internet, access to proper drinking water, access to proper sanitation, electricity distribution, and the use of LPG fuel for cooking. It is most likely that there are still many other determinants of inclusive economic growth at the provincial level but not included in this study due to data problem,

ii) the time frame used is only 2016-2018. Ideally, a dynamic model over a longer time period would be more appropriate. However, for other years, not all provinces have data for all variables,

iii) the data used is provincial data. If the study population is regencies or cities throughout Indonesia (if data are available), the results will be different.

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