International Journal of Psychosocial Rehabilitation, Vol. 24, Issue 09, 2020
ISSN: 1475-7192

Unemployment, Education, Poverty, and Inclusive Growth: Evidence from Provinces in Indonesia

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Abstract--- *The-aim of this study was to examine the effects of unemployment, education and poverty on inclusive growth. The panel data used in this study are a composite of time series for the study time from 2015 to 2018 with a cross section in the form of data on per capita expenditure per household and month, total unemployment, net enrollment rates and the number of poor people at the provincial level Indonesia. The former data in this study are secondary data obtained from the Central Statistics Agency on the website www.bps.go.id. The aftermath of this study show that (1) unemployment significantly affects inclusive growth, (2) education significantly affects inclusive growth, (3) poverty significantly affects inclusive growth.*

Keywords--- *Unemployment, Education, Poverty, Inclusive_Growth.*

I. INTRODUCTION

The Indonesian economy grew by 5.04% by the third quarter of 2019, and this success was also supported by a 10.64% lower in the proportion of impoverished people compared to the first quarter of 2017 to 9.41% in the first quarter of 2019 [1]. However, the fact is that there are still significant differences in the number of poor in several Indonesian provinces, with the proportion of poverty in eastern Indonesia (dark red) much higher than in other regions, as shown in the following figure:

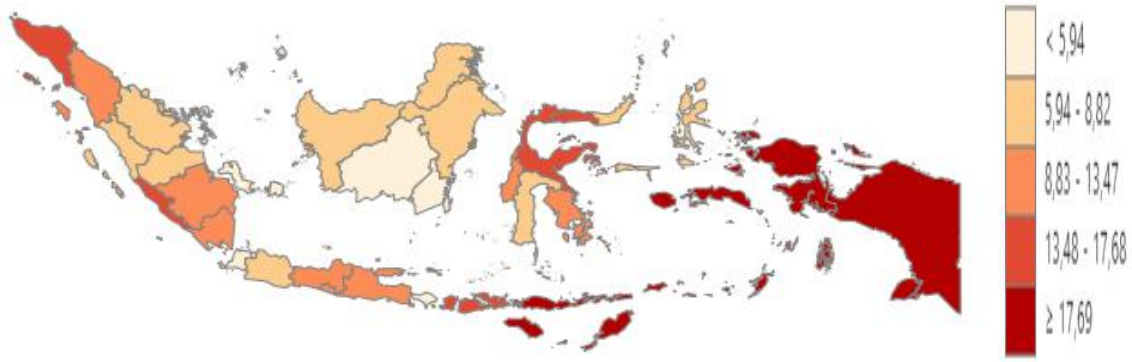

Figure 1 Distribution of Poor Population in Indonesia in March 2019
Source: [1]

Besides, the rise in economic growth in Indonesia continues to create an income gap. This is evident from the Gini coefficient ratio of rural and urban areas in Indonesia. The worth of the Gini ratio is among 0 and 1, with the Gini coefficient 0 for perfect income distribution and the Gini coefficient 1 for perfect inequality. Based on data from [1] for Indonesia, the Gini rate of 0.382 in March 2019 shows that there is still a high level of inequality.

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This undoubtedly illustrates the importance of the role of the government in shaping and creating broader economic progress policies that enable all levels of community to reap the advantage of economic progress, particularly in efforts to combat poverty. According to [2], inclusive growth is growth that can combine the participation of all parties without discrimination and can encompass all economic sectors.

According to [3] state that in the concept of inclusive development, employment opportunities in the formal sector are key to the ability of households to improve their well-being. Although there are significant employment opportunities, poverty reduction does not automatically occur without guaranteeing equal opportunities in employment opportunities. Unequal access to employment opportunities is often due to differences in staff skills. Where poor communities that lack skills and education cannot compete with richer groups of society. So you are faced with conditions of competition that are not balanced. These two factors mean that the poor cannot folow in and assist to the inclusive growth process.

The overall inclusiveness of economic growth at the provincial level is still poor. This emerges from some previous studies by [4], [5], [6], and [7], who conduct specific research in certain regions. This is one of the points that can lead to a reduction in an understanding of this problem. To close this gap, this study attempts to analyze integrative growth at the provincial level in Indonesia from 2015 to 2018. Also, the variables unemployment, education, and poverty are used to identify factors that can influence the components of inclusive growth. The output of this study are supposed to contribute to the government and the relevant interest groups in the design of integrative economic and financial policy studies.

AI. Literature Review And Hypothesis Development

Theory of Income Distribution

The theory of income distribution explains that economic growth, which is the growth of national production, depends on factors of production in which the flow of income to households increases as the rate of economic growth increases. The high growth of a country's production is due to the high productivity of the means of production in the creation of goods and services. Increasing production can increase employment and wages to upgrade the degree of prosperity of the people [8].

Unemployment and Inclusive Growth

The form of poverty alleviation in the form of integrative growth at the macro level is to maximize sectors with high employment elasticity such as trade and agriculture in absorbing high labor [9]. According to [4], low absorption of workers will affect the increase in the unemployment rate, so that the poverty rate also increases and the distribution is uneven. This is in line with studies by [10] and [11] that the higher the unemployment rate, the more difficult it is to reach the economic development goals. Based on this theory, the alternative hypotheses regarding unemployment and inclusive growth are as follows:

Ha_1: Unemployment has a negative impact on inclusive growth

Education and Inclusive Growth

According to [12] with a good level of education, human resources can improve their quality of life through a process of education, training, and development that guarantees increased labor productivity, which guarantees sufficient income and well-being to increase the achievement of inclusive growth. This is in line with research by [13] and [14] that

increasing education will increase labor productivity and promote inclusive economic growth. Based on this theory, alternative hypotheses regarding education and inclusive growth are as follows:

Ha_2: Education has a positive impact on inclusive growth

Poverty and Inclusive Growth

According to [15], the poor do not have access to resources because of poverty, they send their children to school and they have no way of investing to slow down inclusive growth. This is in line with studies by [16], which found that poverty takes various forms, including low incomes and productive resources that guarantee sustainable living, such as hunger and malnutrition, low Income and discrimination It cannot meet basic needs and income is too low, making it unable to participate in inclusive economic development. Based on this theory, the alternative hypotheses regarding poverty and inclusive growth are as follows:

Ha_3: Poverty has a negative impact on inclusive growth

BI. EXPERIMENTAL MATERIAL METHOD

The aim of this study is inclusive growth in all provinces of Indonesia. The type of data used in this study is panel data, which is a composite of time series covering the investigation term from 2015 to 2018 with a cross-section in the form of monthly per capita expenditure per household, the number of unemployed, the pure school enrollment rate and the number-of impoverished people at provincial level in Indonesia. This type of research uses quantitative methods and the data used in this study_are secondary data received from the Central Statistics Agency (BPS) through the website www.bps.go.id. The sample selection is based on a dedicated sample method: The data required for the variables of inclusive growth, unemployment, education, and poverty are recorded completely in BPS during the study period from 2015 to 2018.

Table 1 Experimental Material Method

Variables	Sub Variables	Indicators
Inclusive Growth (INGF) Source: [4]	The average income per capita expenditure a month for food and non-food	INGF = Log (Average monthly income per capita expenditure for food and non-food in rural areas by province i period t) Note: Assuming that all income is used for expenses
Unemployment (UNEM) Source: [10]	Unemployment rate	UNEM = ∑ Number of the working-age population (15 years and over) who are unemployed and unemployed in the province i period t
Education (EDUC) Source: [17]	Total pure school participation	EDUC = ∑ percentage of the Total pure school participation at all levels of primary, secondary and upper education in the province i period t
Poverty (POVY) Source: [18]	Number of poor people	POVY = ∑ percentage of poor population in the province i period t

Test the data quality in this study using the classic acceptance test. Concerning [19], that not all classic acceptance tests that exist in the OLS method are used in panel data, only multicollinearity and heteroscedasticity are required. To test the quality of the data in this study, a multicollinearity test and a heteroscedasticity test with a p-value of 0.05 were therefore used.

IV. DATA ANALYSIS

Statistic Descriptive

Statistical of Descriptive tests in this study included all research variables, including growth as a dependent variable and unemployment, education and poverty as independent variables. Statistical of Descriptive results as follows:

Table 2 Descriptive Statistics_

Variable	Min	Max	Mean	Std Deviation
INGT	5.6516	6.0951	5.8984	0.0833
UNEM	0.0853	0.3044	0.2168	0.0419
EDUC	0.5866	5.5273	2.7119	1.6426
POVY	0,0792	0.5694	0.2298	0.1177

For inclusive growth, there is a minimum of 5.6516 owned by the province of East Nusa Tenggara and a maximum of 6.095 owned by the province of North Kalimantan. The average (mean) for inclusive growth is 5.8984 with a standard deviation of 0.0833. The unemployment variable has a minimum of 0.0853 owned by the province of Bali and a maximum of 0.3044 owned by the province of West Java. The average unemployment rate is 0.2168 with a standard deviation of 0.0419. The educational variable has a minimum of 0.5866 owned by the Province of Papua and a maximum of 5.5273 owned by the Province of Riau. The mean value for education is 2.7119 with a standard deviation of 1.6426. The poverty variable has a minimum of 0.0792, which belongs to the DKI Jakarta province, and a maximum of 0.5694, which belongs to the Province of Papua. The mean (mean) for poverty is 0.2298 with a standard deviation of 0.1117.

Table 3 Classical Assumption Tests

Multicollinearity Test	
UNEM	0.1747*
EDUC	0.4927*
POVY	0.4677*
UNEM*EDUC	0.1523*
UNEM*POVY	0.1073*
EDUC*POVY	0.1166*
Heteroskedasticity Test – Arch: Significant: 0.8969**	

Notes: *p < 0.7 **p>0.05

With 132 observations in this study supererogatory 100 observations, the assumption of normalcy can be ignored. The classic acceptance test is therefore only a multicollinearity and heteroscedasticity test. The central limit theory states that the allocation of the sample approaches the distribution normalcy if a sample with a sufficiently large number approaches or corresponds to 100 observations in this case [20].

Based on the multicollinearity test in Table 3 above, all variables have a correlation value below 0.7 [20], with the correlation between unemployment, education, and poverty including 0.1747, 0.4927 and 0.4677, respectively Shows growth and the value of the correlation of unemployment with education is 0.1523, the value of the correlation of unemployment with poverty is 0.1073 and the correlation value of education and poverty is 0.1166. This shows that there is no multicollinearity in this study. Based on the results of the heteroscedasticity test in Table 3 using the arch test, in which the probability value of 0.8969 is greater than the p-value of 0.05, it can be concluded that there was no heteroscedasticity in this study.

Table 4 Regression Result

INGT = 5.979 – 0.313 UNEM + 0.021 EDUC – 0.308 POVY + 0.035			
Variable	**Coeff.**	**t-stat**	**Prob**
Constant	5.979	166.459	0.000
UNEM	-0.313	-2.334	0.021*
EDUC	0.021	6.171	0.000*
POVY	-0.308	-6.477	0.000*
Prob (F Statistic)			0.000*
Adj R Square			0.424
Std. Error			0.035
N			132

Notes: *p < 0,05

The multiple linear regression model shown in Table 4 has a constant value of 5,979 and the results of the regression coefficient for the unemployment variable show that for every 1% increase there is a 0.313 or 31.3% decrease. then the regression coefficient for the education variable shows that for every 1% increase there will be an increase of 0.021 or 2.1%. Then the regression coefficient for the poverty variable shows that for every 1% increase there is a decrease of 0.308 or 30.8% with a standard error of 0.035 or 3.5%.

For the simultaneous significance test (F statistic), the probability value of 0.000 is obtained below the significance value of 0.05, which indicates that the model used in this study is suitable. Then, to test the coefficient of determination against the adjusted R-squared value, a value of 0.424 shows that the ability of the independent variables unemployment, education and poverty used in this test included the dependent variable including growth of 42.4% and the remaining 57.6 % could be clarified by other variables that are not included in this study.

The results of the partial regression test (t-test) in Table 4 for the unemployment variable have a significant value of 0.021, which is less than the p value of 0.05. This proves that Ha1 is accepted. It could be sum up that unemployment has a significant negative impact on inclusive growth. This is because if the absorption of workers at a low level will increase the unemployment rate, the poverty rate will also increase and the distribution will be unequal and hamper inclusive growth. This is in line with studies by [4], [10], and [11].

The results of the partial regression test (t-test) in Table 4 for the education variable have a significant value of 0.000, which is less than the p-value of 0.05. This shows that Ha2 is accepted. From this, it could be sum up that education has a significant positive effect on integrative growth. So it can be said that an increase in education will lead to an increase in labor productivity and inclusive economic evolution. This is in line with the research by [12], [13], and [14].

The results of the partial regression test (t-test) in Table 4 for the poverty variable have a significant value of 0.000, which is less than the p-value of 0.05. This shows that Ha3 is accepted. From this, it could be sum up that poverty has a significant negative effect on inclusive growth. This is because the poor do not have access to resources due to poverty, do not send their children to school and have no investment opportunities to slow down inclusive growth. This is in line with studies by [15] and [16].

Use the panel data model to obtain empirical evidence of the impact of unemployment, education, and poverty on inclusive growth in the period from 2015 to 2018. The results of the analysis show that unemployment is determined by the number of unemployed persons (aged 15 years and over) who are not in employment, and is demonstrably unemployed. It has been shown that a significantly negative effect on inclusive growth, education, which is afflicted by the total number of attendance of community schools at all levels of primary, secondary and upper school, has a significant positive effect on integrative growth and poverty, which is afflicted by the-number of impoverished people in the province, is one Influence has significant negative to inclusive growth. This suggests that development related to education and the reduction of unemployment and poverty must be increased to achieve inclusive growth.

SUGGESTION

The policy implications of the results of this study suggest that inclusive growth is still not evenly distributed across all provinces of Indonesia. Therefore, the government is expected to compensate by reviewing the data of the poor in each region to use as a reference for educational support for students who are less able and who are implementing development programs that address the problem of unemployment and development tackles poverty directly, such as allocating measurable and targeted regional spending and expanding the number of jobs and basic training for independent companies. The next researcher is expected to increase the number of years of observation and use a broader research focus in several provinces that are still far from inclusive growth.

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