

# Economic Growth, Social Expenditure, Unemployment, and Inflation: The Impact on Poverty in South Sumatera

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**Abstract:** This study examines factors that influence and how to accelerate the decline in the number of poor people in South Sumatera Province from 2009 to 2017. The research used panel data regression, with the Common Effects Autoregressive (1) as the selected model. The results showed that the level of poverty in South Sumatera Province experienced an annual average decrease of 1.87 percent, while at same period, several regencies/cities in South Sumatera experienced an increase, namely: Ogan Komering Ulu, Palembang, East OKU, Pagaram and Prabumulih. The difference in changes in the number of poor people is a result of the occurring structural inequality, because the transition of dominant economic sectors in GDRP is not followed by the optimal labors absorption in the field. The structural imbalance contributes to the economic inequality, poverty, open unemployment and natural resources exploitation in South Sumatera. The test results show an increase in GDRP growth and social expenditure, and a decrease in the open unemployment rate and inflation affect the growth of poor people number in South Sumatera.

## 1 INTRODUCTION

Economic development still leaves a number of issues that should receive serious attention. One of the main problems that arises as a result of the implementation of inconsistent and impartiality national development programs is the widening inequality and chronic poverty (Sugema, Irawan, Adipurwanto, Holis, & Bakhtiar, 2010).

Poverty is one of fundamental problems which become major concern of Indonesia Government (Budiantara, Diana, & Darmesto, 2011). Poverty illustrates the living condition of many developing countries in the world, which consist of not less than one billion of the world's population. The reality shows that most development efforts in poverty alleviation programs have not been sufficiently able to suppress the increase the number of poor people in many countries. The condition was compounded by demographic bonus events in many developing countries over the past few decades. This increase in demographic bonus later increases the number of poor people, even though the increase in population does not supposed to increase the number of poor people.

Badan Pusat Statistik (BPS) publication stated that the percentage of Indonesia's poor population as of March 2018 was only 9.82 percent, which, if it was estimated as many as 25.95 million people, the fewer of the poor population in September 2017 which were 26.58 million people. The statement is in line with World Bank publication data in 2017, where the percentage of poor people in Indonesia is 10.6 percent, with 7.7 percent of poverty comes from the urban areas and 13.9 percent from rural areas (World Bank, 2018).

In addition, according to data from the publication of the Human Development Report (HDR), Indonesia ranked 116th out of 189 countries with HDI values of 0.694 percent, along with a Gross National Product Percapita PPP\$ value of \$ 10,846 in year basic 2011(UNDP, 2018).

Indonesia poverty rate is only 9.82 percent as of March 2018, as reported by BPS, using Purchasing Power Parity (PPP) methodology as its base. PPP is the value of purchasing power of people determined based on the standards of each country, ignoring the prevailing international exchange rate (World Bank, 2018).

Poverty of Indonesia is calculated using the urban poverty line (Rp. 400,995/ capita/ month) and rural poverty line (Rp. 370,910/ capita/ month). In

other words, every Indonesian citizen is considered not poor if the income per capita per day of them is Rp. 13,366 for urban-dweller and Rp. 12,363 for rural areas-dweller (BPS, 2018). The national average poverty line determined by BPS is higher than the World Bank Purchasing Power Parity standard (Novalia, 2018).

The calculation of poverty using the World Bank's PPP standard of US\$ 1.9 per day is measured using 2011 as its base year. The estimated conversion of 1 US dollar in 2011 is Rp11,157/capita/day, which then shifted to Rp13,162/capita/day in 2018 (International Monetary Fund, 2018).

Even Enny Sri Hartati, the Director of the Institute for Development of Economics and Finance (INDEF) stated: "The poverty rate of Indonesia number could be doubled to 70 million people if the USD 1.9/capita/day standard is used" (Suryowati 06/03/2018, <https://www.jawapos.com/jpg-today/06/03/2018/>).

The statement comes from the result of calculation using the applicable international exchange rate. Using the international exchange rate as of March 2018 (Rp. 13,761), the monthly poverty standard is Rp. 784,377/capita/month, equivalent to (Rp. 26,146/ capita/ day). It doubles the standard of Purchasing Power Parity (PPP) used by BPS for both urban and rural poverty standards (Suryowati, Tuesday (6/3) JawaPos.com, <https://www.jawapos.com/jpg-today/06/03/2018/>).

South Sumatera Province ranked the third in the largest poor residents number in Sumatera, and ranked the seventh in all Indonesia (BPS, 2018). The number of poor people in South Sumatera Province is beyond the percentage of the average number of poor people in Indonesia. BPS reported in Semester 1 of 2018, the percentage of the poor population of South Sumatera Province was 12.80 percent, or exceed the average number of poor people in Indonesia (9.82 percent). The condition has been continuously occurring for the past four years, where the percentage target of the number of poor people in South Sumatera Province is always above the national average of 7.5 percent. Therefore, further research is needed in determining the factors affecting the level of poverty in the regencies/cities in South Sumatera Province. The results are expected to provide as a reference in determining the direction of poverty alleviating policies.

Research on the factors determining the number of poor people has been widely carried out, both in national and provincial scale. (Fajriyah & Rahayu, 2016) has conducted a modeling analysis of the

factors that influence poverty in the regencies/cities in East Java Province with panel data regression, which then revealed that the significant predictor variables included literacy, labor force participation, number of population working in the agricultural sector, as well as GDRP per capita. Meanwhile, predictor variables with no effect on the response variable are residents without health access. Furthermore, research related to poverty modeling is carried out by (Zuhdiyati & Kaluge, 2015) with the results showing that the HDI has a significant negative effect on poverty and the open unemployment rate has no significant effect. However, previous research conducted by Yacoub (2012) shows that the open unemployment rate has a significant effect on poverty.

## 2 LITERATURE REVIEW

### 2.1 Poverty Definition

Poverty can be illustrated as a situation where there is a lack of common things related with the life quality, such as food, clothing, shelter and clean water. Economically, poverty can be indicated by the level of lack of resources in fulfilling the needs of life and improve the welfare of a group of people.

According to (Suryawati, 2005) poverty can be divided into four forms : 1) absolute poverty, where the income is below the poverty line or not enough to fulfill the standard needs of food, clothing, health, shelter and education needed to maintain live and gain job; 2) relative poverty, which caused by the failure of development policies in reaching all the layer of communities, causing inequality in income among residents; 3) cultural poverty, refers to the attitude matter of a person or community caused by cultural factors, such as the reluctance to improve the level of life, wasteful, and not creative; and 4) structural poverty, a poverty caused by minimum access to resources that occur in socio-cultural and political systems that do not support poverty alleviation.

### 2.2 Measurement of Poverty

According to BPS, in 2018, the level of poverty is based on the amount of rupiah consumption spent for food, precisely 2.100 calories per person per day (from 52 types of commodities representing the consumption patterns of residents of lower-class), and non-food consumption of 45 types foods commodities in accordance with national agreements

and are not differentiated between rural and urban areas). The adequacy of 2.100 calories applies to all ages, genders, level of physical activeness, body weight, and estimated physiological status of population size, this measure is often referred to as the poverty line.

Otherwise, the human development model from UNDP is also used to measure the poverty in Indonesia. Periodically every three years since 1991, UNDP has been publishing the Human Development Report (HDR). The human development approach is different from conventional approaches such as economic growth, human resource development and community welfare development. The economic growth approach only pursues an increase in Gross National Product (GNP) rather than improving the quality of human life. The human resource development approach makes humans an input factor in the production process, making humans are seen more as tools than as goals. While in the concept of human development, growth is not seen as a goal but as an instrument to reach the goal.

Table 1: Types of Poverty Indexes and Indicators

INDEX	INDICATOR
HDI	<ul style="list-style-type: none"> <li>• Living expectancy level</li> <li>• Adult literacy</li> <li>• Average education length</li> <li>• Purchasing power rate per capita</li> </ul>
HPI	<ul style="list-style-type: none"> <li>• Number of births unable to live until 40</li> <li>• Adult illiteracy</li> <li>• Percentage of the residents without access to clean water</li> <li>• Percentage of residents without access to healthcare</li> <li>• Percentage of underfed children</li> </ul>
GDI	<ul style="list-style-type: none"> <li>• Life expectancy of men and women</li> <li>• Literacy of men and women</li> <li>• Average education length of men and women</li> <li>• Estimated income level of men and women</li> </ul>
GEM	<ul style="list-style-type: none"> <li>• Percentage of number of DPR members from men and women</li> <li>• Percentage of senior level employees, managers, professionals and technical positions of men and women</li> <li>• Estimated income levels of men and women</li> </ul>

Source : (Cahyat, 2004)

The HDR contains an explanation of three indexes: Human Development Index (HDI), the

Gender Development Index (GDI), Gender Empowerment Measure (GEM) and the Human Poverty Index (HPI). In Indonesia, HDR uses BPS data, especially Susenas data, so it has the same survey unit as BPS, namely households.

### 3 RESEARCH METHODOLOGY

#### 3.1 Scope of Research

According to (Sarris, 2001) many results of the study showed that economic growth has an important role in reducing poverty, and governments need more detailed information about it to make a sufficient decisions in allocating APBN and APBD.

In this study the test was conducted twice with different variable components. The first test was carried out on multidimensional variable and the second test on economic dimension variable. The growth of Poverty rates (PM) playing the role as dependent variable in this study, while the growth of GDP with Constant Prices Year 2010 (GDP), the growth of expenditure allocation for social expenditure (BS), open unemployment rate (TPT) , Inflation (I), Literacy (MH), Feasibility Board (KP), Clean Water Access (AAB), growth of Education Participation Less than Middle School (PKS) and Growth of Malnutrition Toddler Number (GB) are the independent variables in this study. The data used in this study are pooled data of 15 regencies/cities in South Sumatra province in year 2008 to 2017, plus additional secondary data from BPS, IDHS, and Bank Indonesia (BI).

The time-span of variables in this study started from year 2009 to 2017.

Table 2: Operational and Dimensional Variables Definition

Research Variables	Operational Definition	Dimension
Growth of Poor People Number	Percentage of growth of poor people (population with average per capita expenditure per month below the poverty line)	Economy
Growth of Constant Price Year 2010 GDRP	Percentage of GDRP growth of each regency/ city	

Growth of Fund Allocated for Social Ependiture	Percentage of growth in social expenditure allocation funds (for social expenditure and included in the regional government expenditure budget)	Economy
Inflation	Percentage of annual inflation rate	
Open Unemployment Rate	Percentage of unemployment to the total workforce	
Literacy Number	Percentage of population aged 15 years and over who can read and write latin letters and/or other letters	
Growth of Education Participant Less than Middle High School	Percentage of school-age population attending school at the primary school level in both private and public school	Education
Household with Clean Water Access	Percentage of households who can access clean water	
Household with Board Feasibility	Percentage of households with housing facilities in the form of permanent walls	Social
The Growth of Number of Malnutrioned Toddler	Percentage of children under five suffering from malnutrition	

### 3.2 Step of Analysis

The steps of data analyzing in this study are as follows (Baltagi, 2005):

1. Estimating the panel data regression using a fixed effect model.
2. Perform a Chow test
  - a) If accepted, then the common effect model is used (continue step 5).
  - b) If rejected, then the fixed effect model is used (continue step 4).
3. Conduct the Hausman test
  - a) If received, then the random effect model is used (continue step 5).
  - b) If rejected, then the fixed effect model is used (continue step 4).
4. Perform an assumptions test on selected models.
5. Perform a parameter significance test which includes simultaneous test and partial test with the revised regression equation
6. Dispose of some research variables that are not in accordance with the theory.
7. Interpret the final model of panel data regression with the selected model.

## 4 ANALYSIS AND DISCUSSION

### 4.1 Poor People and Poverty Factors in Regencies/Cities in South Sumatera

The percentage of poor people in South Sumatra Province over the past decade tends to decrease. It was 17.67 percent in 2008, 14.80 percent in 2010 and 13.48 percent in 2012. However, in 2015 it increased to 13.82 percent, followed by 13.19 percent in 2017. In other words, in 2017 there were 1,086,920 poor people out of 8,052,315 total population in South Sumatra. The average percentage indicates that there are about 123 poor people living in every 1000 people in 17 regencies / cities in South Sumatera Province.

Table 3: The Percentage of Average Growth of Poor People in Regencies/Cities of South Sumatera Province Year 2009 - 2017

Regency/City	Average Growth			
	Poor People	Social Expenditure	Open Unemployment	Inflation
Ogan Komering Ulu (OKU)	2,33	-11,03	4,17	4,89
Palembang	1,89	-11,03	4,17	4,89
Ogan Komering Ulu Timur (OKUT)	0,90	0,47	6,14	4,89
Ogan Komering Ilir (OKI)	0,58	-10,27	1,69	4,89
Pagaralam (PGA)	0,44	1,93	-4,73	3,57
Prabumulih	0,11	10,19	0,32	3,57
Lubuklinggau	-0,57	3,25	-6,65	3,57
Ogan Ilir	-1,59	0,39	-4,99	4,89
Lahat	-1,62	2,04	0,38	3,57
Banyuasin	-1,62	2,31	8,43	4,89
Ogan Komering Ulu Selatan	-2,03	-9,23	3,02	4,89
Musi Banyuasin	-2,22	-2,80	-4,84	4,89
Empat Lawang	-2,68	0,00	-4,51	3,57
Muara Enim	-3,83	10,35	-7,37	3,57
Musi Rawas	-7,18	1,14	-1,15	3,57
Sumatera Selatan Province	-1,87	-8,43	-1,31	4,27

Source: South Sumatera in the Number (reprocessed by authors)

Table 4: The Percentage of Average Contribution of Each Regencies/Cities to South Sumatera Province

REGENCIES/ CITIES	The Percentage of Average Contribution of Each Regencies/Cities to South Sumatera Province Year 2009 – 2017				
	Poor People	GDRP of 2010 Constant Price	Allocation of Social Expenditure Funds	Open Unemployment Rate	Inflation
Palembang	18,26%	27,35%	3,32%	13,55%	7,62%
Ogan Komering Ilir	11,14%	7,88%	23,20%	7,47%	7,62%
Musi Banyuasin	10,30%	16,53%	0,95%	5,62%	7,62%
Muara Enim	9,19%	12,95%	15,64%	6,54%	5,57%
Banyuasin	8,95%	7,65%	1,56%	5,36%	7,62%
Musi Rawas	8,23%	4,57%	15,00%	2,71%	5,57%
Kab. Lahat	6,50%	4,74%	10,75%	5,13%	5,57%
OKU Timur	6,03%	3,93%	11,01%	5,37%	7,62%
Ogan Ilir	5,22%	2,73%	1,21%	4,65%	7,62%
Ogan Komering Ulu	3,81%	3,04%	8,21%	6,13%	7,62%
OKU Selatan	3,62%	3,07%	0,71%	3,52%	7,62%
Empat Lawang	2,96%	1,27%	2,55%	5,93%	5,57%
Lubuklinggau	2,81%	1,57%	4,33%	11,15%	5,57%
Prabumulih	1,87%	1,82%	0,73%	9,53%	5,57%
Pagaralam	1,11%	0,92%	0,83%	7,33%	5,57%
South Sumatera Province	100,00%	100,00%	100,00%	100,00%	100,00%

Source: South Sumatera in the Number (reprocessed by authors)

The average growth of the number of poor people in South Sumatra Province in 2009-2017 decreased by 1.87 percent. This decline did not occur in several regencies/cities in South Sumatra Province. OKU Regency experienced an increase in the number of poor people on average 2.33 percent per year. This was caused by the high average growth of open unemployment of 4.17 percent in OKU Regency with its contribution to open unemployment in South Sumatra Province of 6.13 percent, and caused altogether by high inflation with 7.62 percent average annual contribution to the province. Furthermore, the average increase in the number of poor people in Palembang City was 1.89 percent, OKUT Regency 0.90 percent, OKI District 0.58 percent, PGA City 0.44 percent, and Prabumulih City 0.11 percent. Conversely, there are several other regencies/cities that experience a decline in the average number of poor people. The highest decline was Musi Rawas Regency at 7.18 percent, affected by the decrease in the average annual open unemployment in Musi Rawas Regency by 1.15 percent, and 1.14 percent increase in the average annual allocation of social expenditure.

By its contribution to the number of poor people in South Sumatra Province during 2009 s.d 2017, Palembang City is the greatest contributor with 18.26 percent. The highest GDRP of Palembang City was 37.65 percent, which came from the manufacturing industry sector, which only absorb 11.84 percent of workers from the labor force, while the largest labors-absorber sector in Palembang City was the groceries, retails, restaurants and hotels sector, which was 33.70 percent, contrary to its small contribution (15.57 percent) to GDRP. This caused the open unemployment rate in Palembang City to become the largest contributor to the Province, reaching 13.55 percent. The position of Palembang City as the provincial capital also plays a role in attracting rural communities to urbanize, causing a massive population growth. Large urbanization flows lead to an increase in the number of labor force, but most of the workforce does not have the ability desired by the market so this actually increase the number of open unemployment. In addition, the high inflation factor causes the allocation of social expenditure funds ineffective in reducing the number of poor people in Palembang City.

The lowest contribution of the poor people to South Sumatera comes from Pagaralam City at 1.11 percent. The condition was happened due to the ability of GDRP in the agriculture, forestry, hunting and fisheries sectors to absorb the largest workforce of 50.25 percent, making it the largest GDRP

contributor (25,38 percent) of Pagaralam City over the past 9 years.

Table 5: The Structure of Average Poverty Contribution of Regencies/Cities in South Sumatera 2009 s.d 2017

	Regency / City	Contribution Percentage	Total Contribution to Province		
Above the Province Average	Palembang		40,00%		
	Ogan Komerin				
	g Ilir	18,26%			
	Musi	11,14%			
	Banyuasin	10,30%			
	Muara Enim	9,19%			
Province Average	Banyuasin	8,95%	60,00%		
	Musi Rawas	8,23%			
	Province Average	6,67%*			
	Under Province Average	Lahat		6,50%	60,00%
		OKU Timur		6,03%	
		Ogan Ilir		5,22%	
		Ogan Komerin		3,81%	
		g Ulu		3,62%	
		OKU Selatan		2,96%	
		Empat Lawang		2,81%	
		Lubuklinggau		1,87%	
Prabumulih		1,11%			
Pagaralam					

Source : processed data

The average contribution of poor population in South Sumatra Province over the last 9 years is 6.67 percent. From table 5 above there are six regencies/cities with the level above the average contribution of the poor population in South Sumatra Province: Palembang City (18.26%), Ogan Komerin Regency (11.14%), Musi Banyuasin (10.30%), Muara Enim (9.19%), Banyuasin Regency (8.95%) and Musi Rawas Regency (8.23 percent). At the other hand, there are 11 districts and/or cities, covering 60 percent of the average contribution of the poor population of South Sumatra Province, namely: Lahat Regency (6.50%), East OKU (6.03%), Ogan Ilir (5.22%), Ogan Komerin Ulu

Regency (3.81%), South OKU (3.62%), Empat Lawang Regency (2.96 %), Lubuklinggau City (2.81%), Prabumulih City (1.87 %) and Pagaralam City (1.11%).

Based on BPS data (2018), poverty depth index (P1) and poverty severity (P2) of South Sumatra Province tend to increase during the last three years. In 2017, it sequentially reached 2.35 percent and 0.62 percent. This shows a trend towards an increase in income inequality and an increase in public consumption expenditure. That is, the need for serious attention related to public consumption patterns due to the direct impact on the difference in prices of volatile foods, the ability of the purchasing power of the people and the impact on the rate of inflation. Public consumption expenditures on food consumption are concentrated on processed foods and beverages, grains, tobacco and betel, fish, shrimp and shellfish, as well as vegetables. Meanwhile, the concentration of non-food expenditure concentrates on housing and household facilities, various goods and services, and durable goods.

Labor conditions in South Sumatra Province show the number of Open Unemployment Rate in 2017 is 195,222 people, with the highest number of Palembang City as many as 81,449 inhabitants. Based on data from the last level of education completed by job seekers, both in the city and village, the highest percentage in 2017 was a graduate at the senior high school level with a percentage of cities of 12.84 and a percentage in the village of 12.03. Thus, the total open unemployment rate at the high school level in cities and villages in 2017 is 12.46 percent. In other words, in that year, there were 10,369 unemployment who never had any formal education; 20,392 elementary school graduates; 677,008 middle high school graduates; 985,974 high school graduates; and 452,511 D/I-III/Academy/University graduates in every 4,123,669 workforce. The final level of education also influences job positions of each workforce, and later affect income earned (BPS, 2016). The relationship between poverty and education is particularly important because of the key role played by education in raising economic growth and reducing poverty. The better educated have higher incomes and thus are much less likely to be poor (World Bank, 2005).

And also, Inflation has affects for the poor more than the rich. This is especially true in terms of food, energy, and housing inflation. In fact, a number of studies on inflation and poverty in developing

countries have shown the effect of inflation on the poor (Odekon, 2015).

## 4.2 Research Model Specification Test

### 4.2.1 Multidimensional Variables Testing Chow Test

Chow test is the initial stage of model specification testing to choose the common effect model and the fixed effect model.

Table 6: Redundant Fixed Effects Tests Results

Effects Test	Statistic	Prob.
Cross-section F	0.517670	0.9185
Cross-section Chi-square	8.538564	0.8594
S.E. of Regression	0.103188	
F-statistic	3.516014	
Prob(F-statistic)	0.000654	

The chow test results show that:

$$F = 0.103188 \leq F_{(14;111;5\%)} = 0.517670$$

Because the value of  $F \geq F_{(14;111;5\%)}$ , and Chi-Square probability value  $0.8594 > 0.05$ ,  $H_0$  is accepted, which means the right model is the fixed effect model.

The correct model used in this study is the common effect. If the estimation model chosen is the common effect, there is no need to do a third test and classical assumption test. The next step is to test the significance of the parameters.

### Parameter Significance Test

#### A. Simultaneous Test

Simultaneous testing is done to see the effect of the overall independent variable on the dependent variable. The test results show the probability value (F-statistic) of  $0.00 < 0.05$ , so that  $H_0$  is rejected, meaning that the independent variables simultaneously affect the dependent variable.

Table 7: Simultaneous Test Results of Multidimensional Variables

R-squared	0.402013	Mean dependent var	-0.011393
Adjusted R-squared	0.344558	S.D. dependent var	0.111567
S.E. of regression	0.103188	Akaike info criterion	-1.633337
Sum squared resid	1.330976	Schwarz criterion	-1.418132
Log likelihood	120.2503	Hannan-Quinn criter.	-1.545884
F-statistic	3.516014	Durbin-Watson stat	2.561604
Prob(F-statistic)	0.000654		

## B. Partial Test

Partial test is conducted to see the effect of individual independent variables on the dependent variable, with the criteria if the probability of t value or significance is  $< 0.05$ , there is an influence between the independent variables on the dependent variable partially, and vice versa.

Table 8: Multidimensional Variable Partial Test Result

Variab le	Coeffi- cient	t-number	Prob.	Conclusion
PDRB	-1.542969	-3.642670	0.0004	Significant
BS	-0.001383	-2.940471	0.0039	Significant
MH	0.009761	1.506454	0.1345	Not Significant
TPT	-0.003461	-0.873012	0.3843	Not Significant
GB	-0.003877	-0.970246	0.3338	Not Significant
PKS	0.002914	0.328463	0.7431	Not Significant
AAB	0.001433	2.318121	0.0221	Significant
KP	0.000583	0.17901	0.8582	Not Significant
I	0.007124	1.699702	0.0917	Not Significant

Based on the test results, it can be seen that in the significance level of  $\alpha = 5\%$ , the growth of GDRP, literacy, open unemployment rate, the number malnourished toddler, the number of people with education level less than middle school, house with feasible boarding and inflation do not significantly affect the growth of poor people number in regencies/cities in South Sumatra Province during 2009 s.d 2017.

The panel data regression test results also show that the independent variables of research on the social and educational dimensions do not have a significant influence on the dependent variable, so that the next research step (step 6) was taken to get the best model with selected variables. Therefore, the the social and educational dimensions variable were released from the model, leaving the testing model with only economic dimension variable, including: the growth of constant price year 2010 GDRP, the growth of fund allocation for social expenditure, inflation, and open unemployment level. The basic assumptions that lead to retesting only economic dimension is caused bythe national standard used by BPS, where the calculation is only based on the ability of poor people infulfillingtheir basic needs (basic needs approach) measured by the average spending/ capita/ month according to poverty line (BPS, 2017).

## 4.2.2 Economic Dimension Variable Testing

Chow Testis the basic step in model specification testing, in order to choose common effect model and fixed effect model.

Table 9: Redundant Fixed Effects Tests Results

Effects Test	Statistic	Prob.
Cross-section F	0.758479	0.7112
Cross-section Chi-square	11.824655	0.6204
S.E. of Regression	0.104891	
F-statistic	5.399550	
Prob(F-statistic)	0.000470	

The chow test results show thatthe value of  $F = 0.104891 \geq F(14; 116; 5\%) = 0.758479$ . Because the value of  $F \leq F(14; 116; 5\%)$ , and Chi-Square probability value  $0.00 > 0.05$ , then  $H_0$  is accepted, which means the right model is a common effects model.

As in the testing of multidimensional variables, because the best estimation model is the common effect model, the next step of the test is the significance of the parameters.

### Parameter Significance Test

#### A. Simultaneous Test

Simultaneous testing is performed to see the effect of the overall effect independent variable has caused towards the dependent variable. According to the probability value (f-statistic) significance value of  $0.00 \leq 0.05$ ,  $H_0$  is rejected, which means that overall the independent variables simultaneously affect the dependent variable.

#### B. Partial Test

Partial testing is performed to see the effect of individual independent variables on the dependent variable. If the probability of t-value or the significance is  $< 0.05$ , then there is partially an influence between the independent variables on the dependent variable partially, and vice versa.

Table 10: Partial Test Results of Economic Variable

Variable	Coeffi- cient	t- number	Prob.	Conclusion
GDRP	-1.4631	-3.5208	0.0006	Significant
I	-0.0079	1.8898	0.0610	Not Significant
BS	-0.0011	2.5375	0.0123	Not Significant
TPT	0.0027	0.7910	0.4304	Not Significant



Based on the test results, it can be seen that in the significance level of  $\alpha = 5\%$ , only the GDRP growth and the significant growth of fund allocation for social expenditure variable are significant. The next step is to improve the model with autoregressive (1) to acquire the best model.

Table 11: Economic Variable Partial Test Results with Autoregressive (1)

Variable	Coefficient	t-number	Prob.	Conclusion
GDRP	-1.3324	-3.5208	0.0022	Significant
I	0.0084	1.8898	0.0661	Not Significant
BS	-0.0022	-2.5375	0.0046	Significant
TPT	0.0077	0.7910	0.0232	Significant

After improving the model with Autoregressive (1), only the inflation variable was not significant with a significance value of only 0.06 in the significance level  $\alpha = 5$  percent.

### 4.3 Panel Data Final Regression Model

Based on several tests that have been carried out, the final panel data regression model for the number of poor people in the regencies/cities of South Sumatra Province during 2009 s.d 2017 is the common effects model with Autoregressive (1).

Table 12: Economic Variable Panel Regression Results

Variable	Coefficient	Variabel Connectivity
GDRP	-1.3324	Negative
I	0.0084	Positive
BS	-0.0022	Negative
TPT	0.0077	Positive

With the equation of panel data regression,  
 Growth of PM =  $-0,0379 - 1,3324 \text{ GDRP}$   
 Growth  $-0,0022 \text{ BS Growth}$   
 $+0,0077 \text{ TPT} + 0,0084 \text{ I}$

Where:

Growth of PM = Percentage of the poor people number in South Sumatra provincial regencies / cities during 2009 to 2017

Growth of GDRP = Percentage of Constant Price Year 2010 GDRP

BS Growth = Percentage of Fund Allocated for Social Expenditure

TPT = Open Unemployment Rate

I = Annual Inflation

Regression models for each variable can be interpreted as follows:

1. Decreasing total GDRP production by 1 percent will increase the number of poor people by 1.3324 percent.
2. Reducing the allocation of funds for social expenditure by 1 percent will increase the number of poor people by 0.0022 percent. Poverty alleviation programs through social assistance allocation funds are the PKH, KIP, KIS Program and the formation of the TP2NK.
3. Increasing inflation by 1 percent will increase the number of poor people by 0.0084 percent.
4. Increasing the open unemployment rate by 1 percent will increase the number of poor people by 0.0077 percent.

Based on the model equation, the coefficient of determination is 72.14 percent, meaning the constant GDRP growth in 2010, inflation rate, growth of fund allocation for social expenditure and open unemployment rate can explain the variability of the growth of poor people in regencies/cities in South Sumatra Province at 72.14 percent, while the remaining 21.86 percent is explained by other variables that have not included in the model.

Based on the significance value, it can be seen that the Constant Price GDRP in 2010 has the least significance value of the reference probability value (0.05 percent), which is 0.0022. As well as from the table of sectoral contribution to employment absorption in South Sumatra Province, it can be seen that the growth of GDRP variable has a high contribution value in reducing the growth of the number of poor people through sectoral employment of GDRP. Thus, the connectivity between GDRP and the number of poor people is negatively directed.

From table 13, it is shown that the high contribution of the mining and quarrying sector (21.55 percent) percent is not in line with the absorption of the workforce which only reaches 1.51 percent. It is not comparable to the magnitude of the exploitation of natural resources carried out in the production process.

On the other hand, the agricultural, forestry, huntings and fisheries sector which contributed 18.78 percent turned out to be able to absorb 54.73 percent of the workforce. This indicates that there is an imbalance in the formation of the primary sector GDRP into the manufacturing industry sector and public, social and private services sector. transformation of the absorption of its workforce. The permanent workforce is dominated by the

agricultural, forestry, hunting and fisheries sectors and is slowly transforming into the public, social and private services sector as well as groceries, retails, restaurants and hotels sector. This structural imbalance contributes to economic inequality, poverty, open unemployment and exploitation of natural resources in South Sumatera Province.

Table 13: Ranks of Average Contribution of Constant Price GDRP Year 2010 and Job Opportunity of Each Sector in South Sumatera Province During 2009-2017

Sectoral Job Opportunity in South Sumatera Province	Average Contribution of GDRP	Average Contribution of Job Opportunity
Mining and Quarrying	21,55%	1,31%
Agricultural, Forestry, Hunting and Fishery	18,78%	54,73%
Manufacturing Industry	18,19%	5,24%
Groceries, Retails, Restaurants and Hotels	11,99%	15,91%
Construction	10,70%	4,08%
Public, Social and Private Services	7,87%	12,97%
Transportation, Warehousing and Communication	5,32%	4,09%
Financial, Insurance, Building Rent, Land and enterprises Services	5,31%	1,49%
Eelctricity, Gas and Clean Water	0,29%	0,18%
Total	100,00%	100,00%

Source : BPS Sumsel Dalam Angka (processed data)

In connection with the sectoral contribution of GDRP toward the relevant employment absorption with the results of a study conducted by (Suryahadi, Suryadarma, & Sumarto, 2009) the declines of poverty in Indonesia can be done by increasing the acceleration of the growth of the agricultural sector in the village and at the same time increasing the growth of the service sector in the city. In addition, there is a need to develop a credible industrial relations system that can represent the interests of both formal sector and marginalized workers and thus contribute to alleviating the sense of voicelessness and powerlessness of the poor (Islam, 2015).

## 5 CONCLUSION

1. Poor people in South Sumatera Province during 2008-2017 experienced an average annual decline of 1.87 percent. However, in the same period, several regencies/cities experienced an increase in the number, namely: Ogan Komering Ulu Regency, Palembang City, East OKU Regency, Pagaram City, and Prabumulih City.
2. Palembang City is the highest contributor of the poor population in South Sumatera by 18.26 percent. This is as a result of economic structural imbalances that occur due to changes in the dominant economic sector in GDRP from the sector of Agriculture, Forestry, Huntings and Fisheries to the Manufacturing Industry sector and the Groceries, Retails, Restaurants and Hotels sector, but not followed by optimization of labor absorption. Labors remain dominant in the sectors of Agriculture, Forestry, Huntings and Fisheries and are slowly transforming into the Groceries, Retails, Restaurants and Hotels sector and the public, social and private services sector.
3. The structural inequality between employment absorption and GDRP production value is one of the causes of the low decline in the average growth of open unemployment in South Sumatera, which is only 1.31 percent, is not comparable with the average annual growth of GRDP of 2.89 percent, and thus, causing a low decline in the average growth of the poor population at only 1.87 percent. This structural imbalance contributes to economic inequality, poverty, open unemployment and exploitation of natural resources in the province of South Sumatera.
4. The results of the specification test with the Common Effect Autoregressive (1) model with a variability value of 72.14 percent variables that affect poverty in South Sumatera Province are the GDP growth variables, the growth of social expenditure and the open unemployment rate.
5. Some policies that can be taken to accelerate the decline in the number of poor people are : encouraging investment and increasing the productivity of sectors that absorb a lot of labor such as agriculture, forestry, huntings and fisheries; manufacturing industry (especially agricultural products); and public, social and private services sector. In addition, the government can utilize demography bonuses by improving the quality of human resources through education and community empowerment

in supporting the processing of industrialization of agricultural, forestry, hunting, fishery, mining and quarrying products, as well as developing the tourism services sector to encourage growth synergies in the agro-industry sector, creative economy and other services.

## REFERENCES

- Badan Pusat Statistik. (2017). Provinsi Sumatera Selatan Dalam Angka 2017, 258. Retrieved from <http://sumsel.bps.go.id/index.php/publikasi/index?Publikasi%7B%25%7D5BtahunJudul%7B%25%7D5D=2016%7B&%7D5B%7B%25%7D5BkataKunci%7B%25%7D5D=%7B&%7D5B%7D5D=0309-x>
- Baltagi, B. H. (2005). *Econometric Analysis of Panel Data - Third Edition*. John Wiley & Sons, 2008. <https://doi.org/10.1017/S0266466600006150>
- BPS. (2016). *Indikator Kesejahteraan Rakyat 2016. Publikasi BPS*. <https://doi.org/10.1007/s00717-009-0309-x>
- Budiantara, I. N., Diana, R., & Darmesto, S. (2011). Relationship Pattern of Poverty and Unemployment in Indonesia. *International Journal of Basic & Applied Sciences*, 11 No 6(December), 119–127.
- Cahyat, A. (2004). Bagaimana kemiskinan diukur? Beberapa model penghitungan kemiskinan di Indonesia. *Governance Brief*, 2, 1–8. <https://doi.org/10.17528/cifor/001641>
- Fajriyah, N., & Rahayu, S. P. (2016). Pemodelan Faktor-Faktor yang Mempengaruhi Kemiskinan Kabupaten Kota di Jawa Timur Menggunakan Regresi Data Panel. *Jurnal Sains Dan Seni ITS*, Vol. 5, No(2337–3520), (2301-928XPrint)D-45.
- Ghozali, I. (2009). Aplikasi Multivariate dengan Program SPSS edisi III. *Semarang: Badan Penerbit UNDIP*. <https://doi.org/10.1016/j.o000.2017.11.003>
- International Monetary Fund. (2018). World Economic Update, An Upadte of The Key WEO Projections. Retrieved from <https://www.imf.org/en/Publications/WEO%0AIssues/2018/07/02/world-economic-%0Aoutlook-update-july-2018%0A>
- Islam, I. (2015). Poverty , Employment and Wages : An Indonesian Perspective. In *ILO - JMHLW - Government of Indonesia Seminar on Strengthening Employment and Labour Market Policies for Poverty Alleviation and Economic Recovery in East and Southeast Asia*.
- Novalia, T. (2018). di Balik Angka Kemiskinan BPS, 1–8.
- Odekon, M. (2015). *The SAGE Encyclopedia of World Poverty Inflation*. <https://doi.org/http://dx.doi.org/10.4135/9781483345727.n415>
- Saris, Alexander H. 2001. *The Role of Agricultural in Economic Development and Poverty Reduction: An Empirical and Conceptual Foundation*. Paper prepared for the rural Development Departement of The World Bank. University of Athens, Athens
- Sugema, I., Irawan, T., Adipurwanto, D., Holis, A., & Bakhtiar, T. (2010). The Impact of Inflation on Rural Poverty in Indonesia : an Econometrics Approach, (58 (2010)).
- Suryahadi, A., Suryadarma, D., & Sumarto, S. (2009). The effects of location and sectoral components of economic growth on poverty: Evidence from Indonesia. *Journal of Development Economics*. <https://doi.org/10.1016/j.jdeveco.2008.08.003>
- Suryawati, C. (2005). MEMAHAMI KEMISKINAN SECARA MULTIDIMENSIONAL = UNDERSTANDING MULTIDIMENSION OF POVERTY. *Jurnal Manajemen Pelayanan Kesehatan, JMPK, Vol.*
- UNDP. (2018). Human Development Data (1990-2015) | Human Development Reports. <https://doi.org/10.1007/s00338-005-0033-1>
- World Bank. (2005). INTRODUCTION TO POVERTY ANALYSIS, 90288.
- World Bank. (2018). June 2018 Indonesia Economic Quarterly: Learning more, growing faster. Retrieved from <http://documents.worldbank.org/Curated/En/305361528210283009/Pdf/126891-WP-PUBLIC-On-6-5-18.Pdf>
- Yacoub, Y. (2012). Pengaruh Tingkat Pengangguran terhadap Tingkat Kemiskinan Kabupaten / Kota di Provinsi Kalimantan Barat. *Jurnal Ekonomi Sosial*.
- Zuhdiyati, N., & Kaluge, D. (2015). KEMISKINAN DI INDONESIA SELAMA LIMA TAHUN TERAKHIR ( Studi Kasus Pada 33 Provinsi ), (Atalay), 27–31.