

The Effect of Education and Unemployment on Poverty in Jambi Province**Choirur Rohmah^a, Suratno^b, Kuswanto^c**^{a,b,c}Master of Economics Education, Postgraduate Program, Jambi University, Indonesia* Corresponding author: choirurrohmah31@gmail.com

<i>Info Articles</i>	<i>Abstract</i>
<i>Article history:</i> Received June 6, 2021 Revised June 28, 2021 Accepted July 1, 2021 Available online July 4, 2021	<i>This study aimed to determine the effect of education and unemployment on poverty in Jambi Province. This study uses quantitative methods to analyze the impact of the average length of schooling, expected years of schooling, and the open unemployment rate on poverty in Jambi Province for the 2017-2019 period. The subjects of this study were residents of every district and city in Jambi Province. The type of data in this study is secondary data obtained and collected indirectly from the object under investigation. The things of this research are nine districts and two cities in Jambi province for the period 2017-2019 from the official portal of the Central Statistics Agency (BPS) Jambi Province. The data used are the average length of schooling (RLS), expected years of education (HLS), and the open unemployment rate (TPT), and the number of poor people in Jambi Province in the 2017-2019 period. The results of the study show that education and unemployment simultaneously affect poverty in Jambi Province</i>
<i>Keywords:</i> <i>Education; Unemployment; Poverty.</i>	

INTRODUCTION

Poverty is one of the fundamental problems because it involves fulfilling the most basic needs in life. Poverty is related to income levels and social, environmental, and even empowerment and participation levels (Iqbal, Junaidi, & Hardiani, 2018). Poverty is a condition of deficiency experienced by individuals that directly impact their welfare (Pradipta & Dewi, 2020).

Poverty occurs because the ability of the community of economic actors is not the same, thus hampering the development process carried out through the utilization of development results by the community. Many negative impacts caused by poverty, such as the emergence of social problems, can affect a country's economic development. High poverty causes the costs to carry out economic development to be greater to hamper economic development. (Safuridar & Putri, 2019).

Jambi is one of the provinces in Indonesia that has poverty problems in 38 districts/cities. Poverty in Jambi Province decreased by 7.57% from 7.89%. Statistical data shows that poor people in Jambi Province still have poverty inequality every year; This indicates that the number of poverty in Jambi Province s still not stable (BPS Provinsi Jambi, 2019).

During the last three years (2017-2019), poverty in Jambi Province experienced inequality in each district or city, with the highest percentage of poor people in Tanjung Jabung Timur Regency at 11.52% and the second position being in Tanjung Jabung Barat Regency at 10.52 %. However, in absolute terms, the most significant number of poor people is in Jambi City, reaching 48,950 thousand people. Is understandable because, in terms of population distribution in Jambi Province, the most extensive distribution is in Jambi City. Meanwhile, the lowest number of poor people is in Sungai Penuh

City, a small area and a smaller proportion of the population compared to other regencies/cities, making Sungai Full City the lowest district/city with poor population, both in absolute terms (amount) and in relative terms (percent). This poverty inequality is an important reason to know the factors that influence poverty.

One of the factors influencing poverty is education. Education is the pioneer of development in the country. Quality education is the key to getting job opportunities by making life more meaningful for oneself and others. Getting an education helps reduce social and economic inequalities because education bridges job opportunities. So education is one of the foundations of human society to develop and express self-potential to achieve goals with a productive lifestyle. The contribution of education determines more significant growth for personal excellence paving the way for economic growth and progress of the country. Education is a real asset that can build individuals as well as nations (Barro, 2007; Koestoeer et al., 2016; Yakunina & Bychkov, 2015)

Based on statistical data in Jambi Province, Tanjung Jabung Regency, access to education is the lowest. Kerinci Regency and Sungai Penuh City rank the highest educational attainment in Jambi province (BPS Provinsi Jambi, 2019). The low quality of education causes difficulties in increasing human productivity so that the standard of living is common and impacts improving human quality (Mahroji & Nurkhasanah, 2019).

The measurement of education in this study by the average length of schooling and the expected length of education; Middle Years of Schooling (RLS) is the average number of years completed by the population at all formal education levels. This figure can also describe the quality of education of the people in an area. This figure using three simultaneous variables: the school participation variable, current/previous level/class, and diploma last owned. The population estimated in this average length of schooling is the population aged 15 years and over. While the Expectation for Schooling (HLS) is the length of school (in years) expected to be felt by children at a certain age in the future. The HLS number shows the opportunity for children aged seven years and over to receive formal education at a particular time (BPS Provinsi Jambi, 2019).

The number of years of schooling of a population reflects educated human resources (Huebener & Marcus, 2017). Both the Jambi Province HLS and RLS are at safe levels in national comparisons. Based on the Regional Education Balance data, the dropout rate in Jambi Province is still relatively high in this millennial era. Dropouts by various problems include early marriage, economic factors, lack of motivation to learn, environment, association, residence, and culture. The issue of cost is not a significant factor in the financial aspects of the people of Jambi Province, one of which is because the livelihood of parents who move around causes them not to continue their education when they change their domicile; This often happens in rural areas (Djatomiko, 2019). A large number of dropouts in Jambi Province will decrease the community's quality of life and the possibility of increasing unemployment. The increase in

unemployment in Jambi Province is likely to affect poverty in Jambi Province. So it is known that unemployment to be a factor of poverty.

Unemployment is a macroeconomic problem that directly affects human survival (Safuridar & Putri, 2019). The harmful effect of unemployment is a decrease in income, which impacts reducing the welfare that has by individuals (Pradipta & Dewi, 2020). Reduced interest caused by unemployment will lead to increased opportunities to in poverty. Research result Seran, (2017) also states that the movement of poverty follows unemployment. That is, when the unemployment rate increases, the poverty rate automatically increases.

The indicator used to measure its performance in labor for unemployment is done through the open unemployment rate (TPT). The available unemployment rate is the ratio of the total unemployed to the entire labor force. Open unemployment consists of those who do not have a job, are looking for work, preparing for a business, and those who are not looking for work because they feel it is impossible to get a job and those who already have a job but have not started working. (BPS, 2021). The unemployment rate in Jambi Province for the 2017-2019 period has decreased and is uneven.

This study to determine the quality of education and unemployment related to poverty. Research on education and unemployment on poverty has in other areas (Pradipta & Dewi, 2020, Putra & Arka, 2016, Wirawan & Arka, 2015). Based on research conducted by Putra & Arka, (2016) and Wirawan & Arka, (2015), education and unemployment significantly affect poverty. Higher education affects reducing poverty, while high unemployment affects increasing poverty. In research conducted by Pradipta & Dewi (2020), education does not affect the poverty level in Banten Province because although the average length of schooling is high, the poverty rate is also high. The difference between the research conducted with previous research is that in this study, the education indicator is the average length of schooling and the expected length of education to analyze the effect on the poverty level in Jambi Province.

This study aimed to determine the effect of education and unemployment on poverty in Jambi Province. Education through indicators of the average length of schooling and school expectations. Meanwhile, unemployment uses the open unemployment rate indicator. With this research, the government can decide on policies, planning, and evaluating the distribution of educational programs in Jambi province.

RESEARCH METHODS

Quantitative methods to analyze the effect of the average length of schooling, expected years of education, and the open unemployment rate on poverty in Jambi province for the 2017-2019 period. (Gujarati, 2006; Widarjono, 2017). This research is deductive, using concepts and theories to answer the problem formulation to formulate and test hypotheses. After the data is collected, the data is analyzed quantitatively (Sugiyono, 2013). Then it will produce empirical support based on observations and experiments in the form of numbers against economic theory (Gujarati, 2006; Widarjono, 2017).

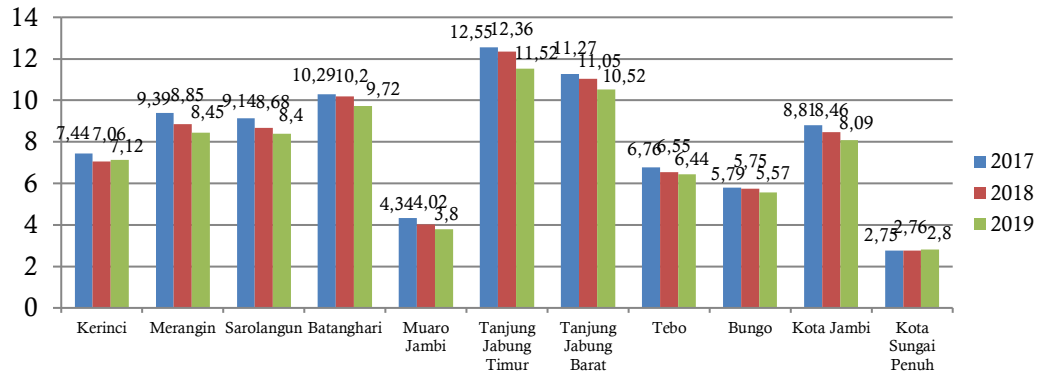
Subjek penelitian ini adalah penduduk di setiap kabupaten dan kota di provinsi Jambi. Penduduk provinsi Jambi adalah semua orang yang berdomisili di wilayah geografis provinsi Jambi selama 6 bulan atau lebih yang tujuan untuk menetap pada periode 2017-2019. Jenis data pada penelitian ini adalah data sekunder yang merupakan data yang didapat dan dikumpulkan tidak langsung dari objek yang diteliti. Sumber data sekunder diperoleh dari portal resmi United Nation Development Programme (UNDP) dan Badan Pusat Statistik (BPS). Data sekunder yang digunakan bersifat panel, dengan maksud data terdiri dari gabungan data deret waktu (time series) dan penampang (cross section). Objek penelitian ini adalah 9 kabupaten dan 2 kota di provinsi Jambi periode tahun 2017-2019 dari portal resmi Badan Pusat Statistik (BPS) Provinsi Jambi. Data yang digunakan adalah rata-rata lama sekolah (RLS), harapan lama sekolah (HLS), dan tingkat pengangguran terbuka (TPT) dan jumlah penduduk miskin di Provinsi Jambi pada periode tahun 2017-2019.

The data analysis technique used is panel data regression analysis, a combination of time series and cross-section data (Greene, 2003). Panel data regression combines time-series data and cross data with model estimation methods, namely the standard effect model, fixed effect, and random effect, to assist repeated observations through dynamic exploration (Firdaus & Irawan, 2009). There are several tests in choosing the correct model, namely the Chow, Hausman, and Lagrange multiplier tests. The Lagrange multiplier test if the model selected in the Chow test is fixed effect and the model chosen in the Hausman test is a random effect. If the selected Chow and Hausman tests are fixed effects models, then there is no need to do a lagrange multiplier test. After knowing the correct model, the next stage is hypothesis testing, namely: (1) Determination Coefficient Test (R²), (2) F test, (3) T test.

RESULT AND DISCUSSION

Poverty is a state of complete deprivation experienced by a group of people. They cannot enjoy proper health, higher education, and food consumption less appropriate in terms of health. Poor people do not have quality, so that productivity is low, resulting in low economic growth. Figure 1 shows that the percentage of the poor decreased in the 2017-2019 period

Figure 1. Percentage of Poor Population in Jambi Province 2017-2019

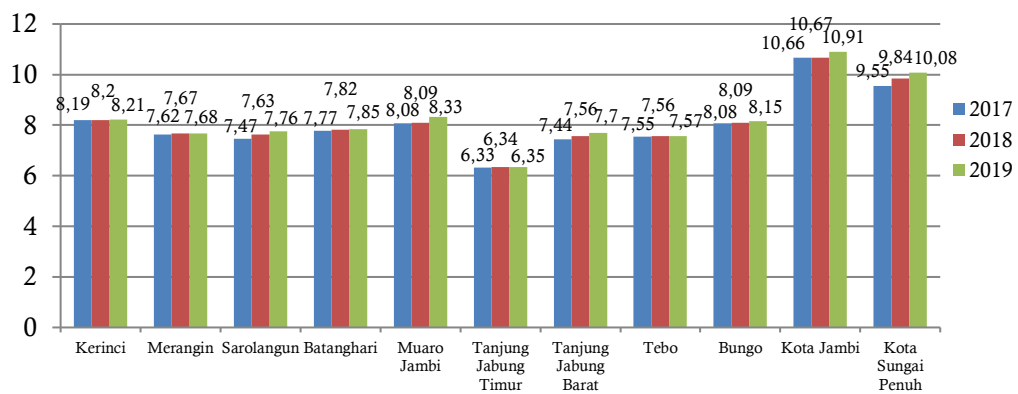


Source: BPS Provinsi Jambi, 2019

The number of poor people in each district/city is different, indicating inequality in poverty in Jambi Province. East Tanjung Jabung Regency has the most significant percentage of poverty, namely 11.52% in Jambi Province, and the second position is East Tanjung Jabung Regency at 10.52%. However, based on the number of poor people in Jambi province, Jambi City is the largest, with 48,950 people; This is because the population of Jambi City is more significant than other districts/cities in Jambi Province, which is 90,910 people.

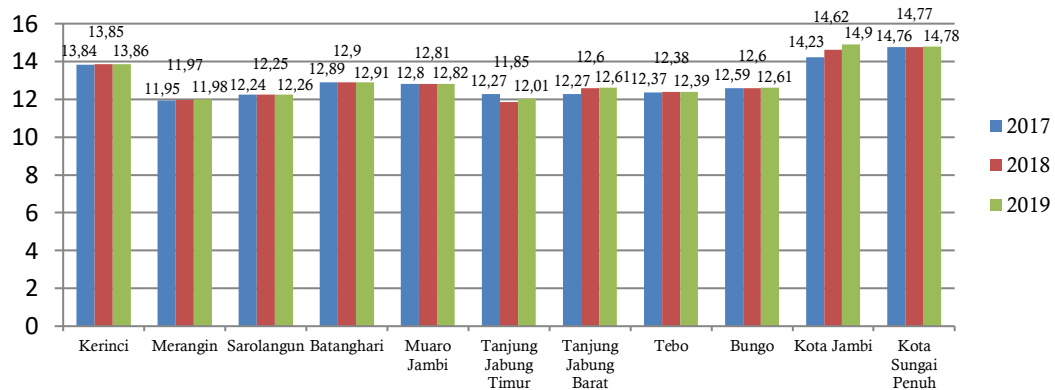
One of the factors influencing poverty is education. Education is the pioneer of development in the country. Quality education is the key to getting job opportunities by making life more meaningful for oneself and others. Education is one of the foundations of human society to develop and express self-potential to achieve goals with a productive lifestyle. Education indicators can be measured using schooling (RLS) and expected years of education (HLS).

Figure 2. Average Length of Schooling in Jambi Province 2017-2019



Sources: BPS Provinsi Jambi, 2019

Figure 3. Expectations of School Years in Jambi Province 2017-2019

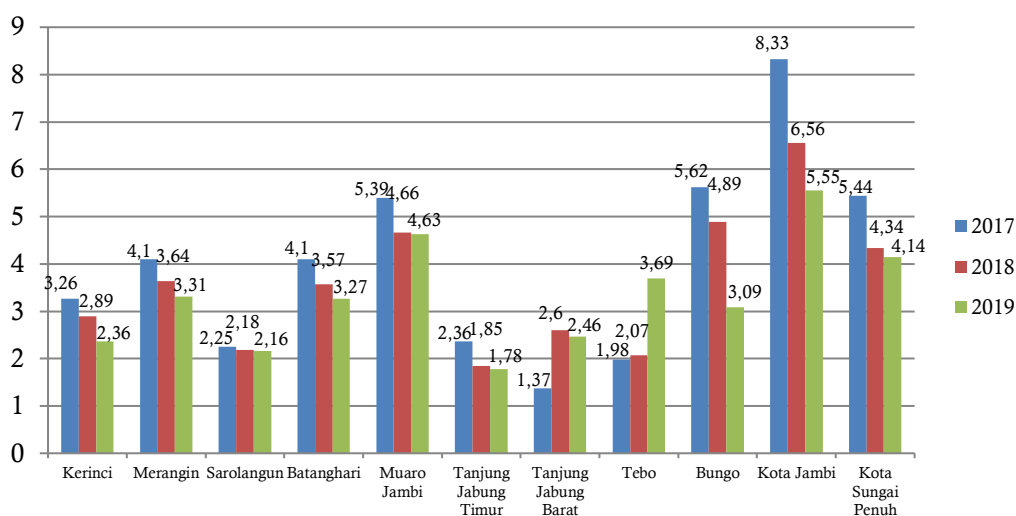


Sources: BPS Provinsi Jambi, 2019

Pada gambar 2 dan gambar 3 menunjukkan angka tertinggi HLS dan RLS di Provinsi Jambi diraih oleh Kota Jambi sedangkan angka terendah dimiliki oleh Kabupaten Tanjung Jabung timur (BPS Provinsi Jambi, 2019). Expected years of schooling (HLS) and the average length of education (RLS) of Jambi Province are at safe levels in national comparisons. Based on the Regional Education Balance data, the dropout rate in Jambi Province is still relatively high in this millennial era. Dropouts by various problems include early marriage, economic factors, lack of motivation to learn, environment, association, residence, and culture. The number of dropouts in Jambi Province will cause community difficulties in finding work and increase unemployment. Unemployment is likely to affect poverty.

Unemployment occurs due to the high rate of change in the labor force compared to a relatively large number of jobs. The absorption of labor tends to be small in percentage due to the low growth rate of job creation to accommodate workers ready to work. Unemployment can also occur if the workforce is not capable or skilled enough to work in the available jobs (Mahroji & Nurkhasanah, 2019). The indicator that measures unemployment is the Open Unemployment Rate (TPT). The value of the TPT indicates the size of the working-age population included in unemployment. Figure 4 shows that the unemployment rate has decreased from the period 2017 to 2019. Jambi City occupies the highest open unemployment rate, and the lowest is in East Tanjung Jabung Regency; This is because the largest population in Jambi province is in Jambi, so that the people who need work are also significant.

Figure 4. Open Unemployment Rate in Jambi Province 2017-2019



Sumber: BPS Provinsi Jambi, 2019

Education and unemployment on poverty in Jambi Province using a study with an estimation method. Indicators for education are the average length of schooling, and the expected size of education, while unemployment indicates the open unemployment rate. The selection of the model in the study using the Chow test. The Chow test helps determine the best model between the common effect or fixed-effect models. If the probability value of Chi-Square > 0.05 indicates that H_0 is accepted, the researcher uses the standard effect model. Meanwhile, if Chi-Square < 0.05 , it shows that H_0 is rejected and uses a fixed-effect model to process the data. Based on the Chow test in table 1, the Chi-Square probability < 0.05 indicates that H_0 is left so that the fixed effect model in processing the data.

Table 1. Chow Test Results

Effects Test	Statistic	d.f.	Prob.
Cross-section F	38.851.352	-10,19	0.0000
Cross-section Chi-square	101.165.959	10	0.0000

Hausman test compares and determines the best model between fixed-effect models or random effects. If the probability value of Chi-Square > 0.05 indicates that H_0 is accepted, the researcher uses the random effect model and proceeds to the next test. Meanwhile, if Chi-Square < 0.05 , it shows that H_0 is rejected and uses a fixed-effect model to process the data. From table 2, it can be seen that the probability value of Chi-Square < 0.05 so that the model used is a fixed effect. No Lagrange multiplier test performed; the Chow test and Hausman test were fixed-effects models; So that the model chosen in this study is the limited effect model

Table 2. Hausman Test Results

Test Summary	Chi-Sq. Statistic	Chi-Sq. d.f.	Prob.
Cross-section random	9.315311	3	0.0254

Based on the fixed-effect model, it is known that the coefficient of determination (R-Squared), F test, and T-test. The value of the coefficient of determination reflects how the independent variable can explain much variation of the dependent variable. If the Coefficient of Determination value is equal to 0, the interpretation of the dependent variable cannot be explained by the independent variables at all. Meanwhile, suppose the value of the Coefficient of Determination is equal to 1. In that case, the variation in the dependent variable as a whole can occur by the independent variables. The R-squared result of 0.965338 indicates a value close to one; This means that 96.5% of the independent variables can explain the dependent variable, while 3.5% by other variables not included in the study.

Tabel 3. Hasil Uji F

F Statistic	F Tabel	Information
0.000	0,05	Signifikan

F-test analysis showed the results of F-statistic $0.000 < 0.05$, which means that the average length of schooling, the expected size of education, and the open unemployment rate have a simultaneous effect on poverty. After knowing the results of the F test, a T-test analysis to determine the partial effect between the independent variable and the dependent variable.

Table 4. t - Test Results

Variable	Coefficient	t-Statistic	Prob.
Poverty (C)	-307.2002	-3.398792	0.0030
Average Length of School (X1)	8.603725	1.221300	0.2369
Old School Hope (X2)	18.49801	2.685430	0.0146
Open Unemployment Rate (X3)	3.519796	3.320871	0.0036

The T-test results show that the average length of schooling has a probability of $0.2369 > 0.05$ so that the average size of education does not affect poverty. Expected years of schooling obtained a value of $0.0146 < 0.05$, so the long-term expectation of instruction certainly affects poverty. The open unemployment rate has a probability value of $0.0036 < 0.005$, so it is certain that the available unemployment rate influences poverty in Jambi Province.

Education in Jambi Province is depicted with the average length of schooling and the expected length of education. The T-test results for the average size of education do not affect poverty because the probability value is $0.2369 > 0.05$. At the same time, the expectation of extended schooling influences poverty because the probability value is $0.0146 < 0.05$. The average length of education does not affect poverty, possibly due to the inequality in the average size of schooling in Jambi Province. The highest average number of years of schooling in Jambi Province, namely Jambi City at 10.35 years, has a

relatively high percentage of poor people at 8.09%. Meanwhile, the lowest average length of schooling is in Tanjung Jabung Timur Regency of 6.35 years and has a portion of the poor population of 11.52%, which is not too far from the number of poor people in Jambi City.

The Effect of Education and Open Unemployment on Poverty

The research results are not by [Mankiw \(2012\)](#), which states that education is a form of individual investment, where the higher the education, the better the welfare of an individual. This increase in education can go through the average length of the school. This study follows [Niswati \(2014\)](#). There is no effect of the average size of education on poverty because the sectors that play an essential role in this research are trade, hotels, restaurants, and agriculture, so they do not need workers with higher education. Meanwhile, in Jambi Province, the dominant community's economic activities in the agricultural, plantation, and forestry sectors may also not need workers with higher education ([Bappenas, 2015](#)).

The analysis results on the average length of schooling indicators found that the average size of education had no significant effect on poverty in Jambi Province; This is due to the inequality in the average length of schooling for the number of poor people Jambi Province. For example, in 2019, the average size of education in Jambi Province was 10.91 years, but the number of poor people was still quite large, namely 8.09%. This research follows [Pradipta & Dewi, \(2020\)](#), which states that there is no effect of the average length of schooling on poverty. Although the average size of education in the area is high, the poverty rate is also high.

Educational indicators of school year expectations influence poverty. The highest school year expectations in Jambi Province, namely Sungai Penuh City at 14.78 years, have a percentage of poor people at 2.8%. The lowest school year expectations in Jambi Province, namely Merangin, have school expectations. Of 11.98 years with a relatively high number of poor people of 8.45%, the higher the expectation of the length of schooling, the lower the poverty in Jambi Province. However, the long-term expectation of school only shows the condition of development from an educational aspect; for example, the Jambi Province HLS reached 12.93 years in 2018; This means that children aged seven years in 2018 have access to formal education for 12 years. ,93 years old or equivalent to graduating from high school/diploma I ([BPS Provinsi Jambi, 2019](#)). The improvement in educational infrastructure development conditions should by a rapid increase in the quality of education through an increase in the average length of schooling. The dropout rate in Jambi Province, which is still quite large, is the cause of the delay in increasing the average size of education. Dropouts by various problems include early marriage, economic factors, lack of motivation to learn, environment, relationships, residence, and culture ([Djarmiko, 2019](#)). Therefore, there is a need for government policies to increase the average length of schooling.

The open unemployment rate indicator shows the effect of unemployment on poverty in Jambi Province. The study results prove that the open unemployment rate certainly influences poverty in Jambi Province

because the probability value is $0.0036 < 0.005$. Low-income levels, inadequate housing, poor health, little or no education, high infant mortality rate, relatively very low life expectancy—short and intense opportunities to find work indicate a common standard of living. If the chance to get a job is low, it will cause unemployment. High unemployment will generate income to decrease, not meet daily needs, ultimately leading to poverty (Karisma & Soejoto, 2013). So, the government must continue to reduce the unemployment rate because a decrease in unemployment will reduce the number of poor people in Jambi Province.

Based on the F test, the results of the independent variables (X1, X2, X3) obtained the F-statistic value $0.000 < 0.05$. The results of the F test prove that the hypothesis that education and unemployment have a simultaneous effect on poverty in Jambi Province. The cause of poverty is due to lack of income and assets (lack of income and assets) to meet basic needs such as food, clothing, housing, and an acceptable level of health and education. Unemployment is indirectly related to poverty because the poor cannot obtain adequate education and nutritious food (Annur, 2013). Another cause of poverty is inequality in the quality of human resources. The low rate of human resources results in personal knowledge and skills, resulting in low productivity, ultimately affecting individual work (Aziz, Rochaida, & Warsilan, 2016).

Discussion

Based on the research, there are two education indicators, namely the average length of the school and the expected length of the school. The average length of schooling in poverty shows that the average length of schooling does not affect poverty. The results obtained are not following the results of relevant research Sudiharta & Sutrisna (2014); Wirawan & Arka (2015); and Putra & Arka (2016), which shows that the average length of schooling has a significant effect on poverty. The analysis results indicate that the level of education through the indicator of the average length of schooling has a negative and significant effect on the poverty level; the higher the level of education, the lower the poverty level community. Vice versa, the lower the level of education, the higher the poverty of the people of an area. The study results on the average length of schooling are not following the relevant research. Although the average length of schooling in the Jambi province is high, the poverty rate is also high. (Pradipta & Dewi, 2020).

In the indicator of long school expectations, the results show that long school expectations significantly affect poverty; This means that the increasing expectations of the length of school will reduce the number of poor people in the Jambi province. The results obtained are not following Bancin & Umaruddin (2020), which shows no significant effect between long school expectations on poverty. The insignificant number of years of school expectations in the research is due to the lack of targeted government policies in providing subsidies in education such as scholarships to students.

The analysis results for unemployment on poverty show that the unemployment rate has a significant effect on poverty. The results of this study by relevant research Karisma & Soejoto, (2013), Wirawan & Arka (2015),

Yanthi & Marhaeni (2015), and Aristina, Budhi, Wirathi, & Darsana (2017) results in the unemployment rate having a significant effect on poverty. The higher the unemployment rate, the higher the poverty rate in an area will be. And vice versa, the lower the unemployment rate, the lower the poverty level of the community.

CONCLUSION

This study aimed to determine the effect of education and unemployment on poverty in Jambi Province. Teaching on poverty is known based on the average length of schooling and the expected length of education. The results showed that the average size of education did not have a significant effect on poverty. In contrast, the expectation of the length of schooling has a substantial impact on poverty, with the higher the poverty, the lower the poverty level. However, the improvement in educational infrastructure development conditions should be a rapid increase in the quality of education through an increase in the average length of schooling. Therefore, there is a need for government policies to increase the average size of instruction.

On unemployment, the results show that the open unemployment rate certainly influences poverty in Jambi Province. The decrease in unemployment has a positive effect on reducing poverty. If the opportunity to get a job is low, it will cause unemployment. High unemployment will generate income to decrease, not to meet daily needs, ultimately leading to poverty. Therefore, the government must continue to reduce the unemployment rate to reduce poverty in Jambi Province. This study has limitations because the period is only for the last three years because the data available for the open unemployment rate in Jambi Province is only available in the 2017-2019 period.

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