Research Paper   Open Access

The Effect of Education and Dependency Ratio on Economic Growth and Poverty in Papua

Tiara Angel BR Ginting [1], I Ketut Sudibia [2] Ni Putu Martini Dewi [3,] Anak Agung Istri Ngurah Marhaeni [4]
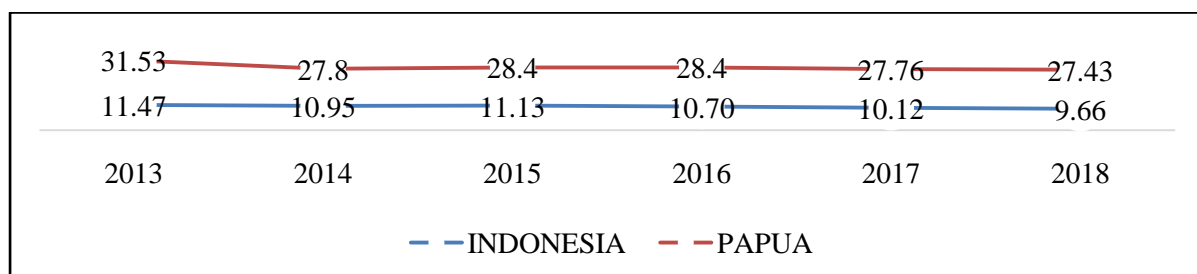*Faculty of Economics and Business, Udayana University, Bali, Indonesia*

ABSTRACT: Poverty is a condition that illustrates the inability to meet basic needs. Until now, poverty in Indonesia is still concentrated in Papua Province. The purpose of this study is to analyze: 1) the direct effect of education and dependency ratio on economic growth; 2) the direct effect of education, dependency ratio and economic growth on poverty; 3) the indirect effect of education and dependency ratio on poverty through economic growth in the District of Papua Province. This study uses secondary data with 145 observations consisting of cross section data of 29 districts and time series data from 2014 until 2018 also conducted in-depth interviews. The analysis technique used is path analysis. The results showed that: 1) education had a positive effect while the dependency ratio had a negative and significant effect on economic growth; 2) education and economic growth have a negative effect, while the dependency ratio has a positive and significant effect on poverty; 3) there is an indirect effect of education on poverty through economic growth, while there is no indirect effect of the dependency ratio on poverty through economic growth in the District of Papua Province.

KEYWORDS : *Education, Dependency Ratio, Economic Growth, Poverty*

I. INTRODUCTION

One of Indonesia's national development goals based on the Preamble of the 1945 Constitution is to advance social welfare. Poverty is one of the easiest indicators to use in assessing the welfare level of a country (Samputra & Mundandar, 2019). Poverty is seen as a condition of lack of money and goods in meeting the needs of daily life. The existence of poverty causes a person not only to live in lack of money and a low income level, but also is associated with a low level of health, a low level of education, limited employment and the powerlessness experienced in meeting the necessities of life. Poverty can be said to be multidimensional which includes various aspects of community life (De Silva & Sumarto, 2015).

In terms of poverty reduction, the United Nations launched Sustainable Development Goals (SDGs) as a development agreement that encourages changes towards sustainable development to encourage social, economic and environmental development. The first point in the SDGs is no poverty which means that the world has agreed to eradicate poverty in any form. Thus, Indonesia also has nine priority agendas designed by President Joko Widodo in Nawacita where one of them is the sustainability of the human development agenda such as poverty, hunger, gender justice, and the fulfillment of access to water and sanitation.The poverty of an area can be measured through the percentage of poor population. Based on data sourced from BPS it is known that poverty in 2013 to 2018 in Indonesia experienced fluctuations and tended to decrease. This also happened in Papua Province, which experienced a decrease in the percentage of the poor population, but poverty in Papua Province was always twice as large as Indonesian poverty nationally. Following are data on the development of the percentage of poor people in Papua Province and Indonesia nationally from 2013 to 2018.

Source: Data Processed, 2019
Figure 1 Comparison of Poverty Development

Poverty between the islands in Indonesia is very clearly seen the difference caused by geographical location. Provinces in Eastern Indonesia show higher poverty values (Saputra, 2018). The percentage of poor people in Papua is still always greater than the percentage of poor people in Indonesia nationally. This illustrates the severity of poverty in Papua so that it reaches twice the national poverty rate in Indonesia. Papua is the province with the highest poverty in Indonesia and the average Papuan population lives below the poverty line more than Indonesia nationally (Hardinandar, 2019).

Both in developed and developing countries, poverty becomes a complex and chronic problem (Vincent, 2009). The problem of poverty in an area can also be caused by poor quality of human resources caused by poor education. The level of education is certainly very much related to the incidence of poverty, where in general the higher the education level of the population, the incidence of poverty will be even lower (Inna Dariwardani, 2015). Education plays a role as the most important factor that can get a person out of poverty. The higher level of education will have a greater positive impact on the economy (Pegkas, 2014). In Papua, the quality of education is considered to be very low and concerning. In these areas schools are often found with poor facilities and infrastructure and the quality of incompetent teachers. the population who have never attended school is at the top level with the largest percentage at 28.37 percent with the smallest percentage at the college level at 6.02 percent.

An increase in population growth each year can cause a change in the age structure of the population, namely an increase in the number of non-productive populations (0-14 years) and in turn will increase the dependency ratio. Dependency ratio is one of the demographic indicators that can roughly indicate a country's economic situation. The higher the dependency ratio, the higher the costs incurred to finance unproductive populations. Thus when the dependency ratio in an area increases it can cause a decrease in economic growth and lead to an increase in poverty. Many people in this world live in conditions of severe poverty (Kozak *et al.,* 2012). Poverty is the biggest challenge facing the world (Kanayo, 2014). This poverty problem was triggered because of the low economic growth (Dao, 2012). Realizing high economic growth is expected to have the role of government to utilize all resources optimally (Fajrii, 2016). An increase in changes in economic conditions is a result of the process of increasing overall production capacity by looking at output and illustrated in the form of an increase in national income (Pangiuk, 2018).

Education has a negative and significant effect on poverty (Aref, 2011). The low productivity of the poor can be caused by their low access to education (Suhartini & Yuta, 2015). By investing in education, Indonesia can improve prosperity, productivity, income and achieve wealth in the long run and be sustainable (Kurniawan & Managi, 2018). Education plays an important role not only for innovation but also in determining long-term growth (El- Mefleh & Shotar, 2008). The same thing was stated from the results of research by Arabi & Abdalla (2013) that human resources can contribute to improving technical progress because education facilitates innovation, diffusion and adoption of new technologies. Therefore, it is very important to understand how knowledge (education) in developing countries and how knowledge affects economic growth (Kaur & Singh, 2016). Dependency ratios are indicators that can be used to identify economic conditions in terms of demographics in an area and have a positive correlation with conditions of welfare and other social problems.

Based on data obtained from the Central Bureau of Statistics, it is known that poverty in Indonesia until 2018 is still concentrated in Eastern Indonesia and the most prominent is Papua Province. Thus, an in-depth understanding of the causes of high poverty in Papua Province is needed so that in the future it can solve the problem of poverty. The objectives in this study are: 1) Toanalyze the direct effect of education and dependency ratio on economic growth in district of Papua Province;2)Toanalyze the direct effect of education, dependency ratio, and economic growth on poverty in district of Papua Province;3)Toanalyze the in direct effect of education and dependency ratio on poverty through economic growth in district of Papua Province.

II.   LITERATURE REVIEW

Poverty is an absolute or relative condition that causes a person or group of people in an area to not have the ability to meet their basic needs in accordance with the values or norms prevailing in the community due to natural or natural, cultural and structural causes (Emalia, 2013). According to Todaro (2008: 203) poverty can be distinguished according to its nature which consists of absolute poverty and relative poverty. The Central Bureau of Statistics defines poverty as the inability to meet minimum living standards, which include food and non-food, the value of the minimum needs standard is used as a poverty line or poverty line, which consists of two components namely the food poverty line and the non-food poverty line.

Poverty is a condition of lack of money, low levels of income and not meeting the basic needs of daily life. But in reality, poverty is a very complex problem, both from the causes, as well as the impacts it causes (Windia, 2015). The theories of poverty generally lead to two major paradigms that also affect the understanding of poverty and poverty reduction. The intended paradigm is as follows: 1) Neo-Liberal Paradigm, this approach explains that poverty is an individual problem which is a result of individual choices. In this paradigm, individuals and free market mechanisms become the main focus in seeing poverty (Syahyuti, 2006:

95). 2) Social Democracy Paradigm, in this approach the closed accesses to certain groups are the cause of poverty.

An increase in economic conditions is a result of the process of increasing overall production capacity by looking at output and illustrated in the form of an increase in national income. Economic growth has a positive impact on poverty reduction (Pangiuk, 2018). On the other side, education has a negative and significant effect on poverty (Margareni et al, 2016). In fact, we can see that by investing in education will be able to improve the quality of human resources shown by increasing the knowledge and skills so that it will encourage increased work productivity. Dependency ratio is an indicator that can be used to identify economic conditions in terms of demographics in an area and have a positive correlation with conditions of welfare and other social problems.Syamsuddin (2013) proves that dependency ratio has a negative and significant effect on economic growth. This shows that the smaller the dependency ratio will increase economic growth which in turn can reduce the percentage of poor people.
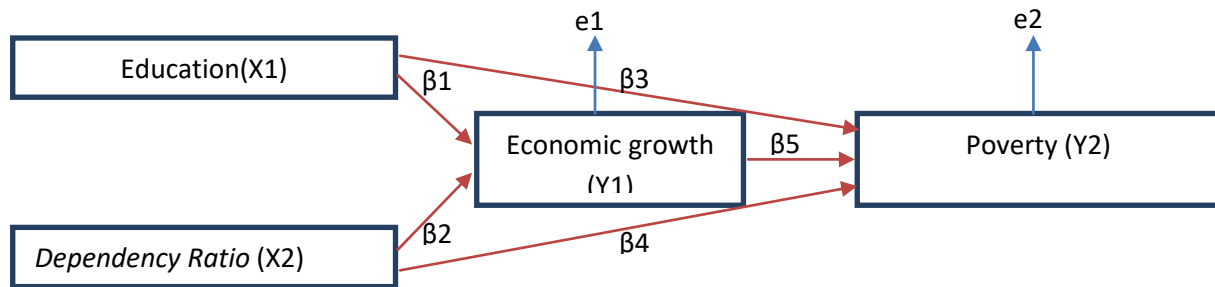

Figure 2.Conceptual Framework

The hypothesis is formulatedasfollows:1)Education has a positive effect while the dependency ratio has a negative effect on economic growth in district of Papua Province; 2) Education and economic growth have a negative effect on poverty, while the dependency ratio has a positive effect on poverty in Papua Province. 3) Education and dependency ratio have an indirect effect on poverty through economic growth in district of Papua Province.

III.   RESEARCH METHOD

This study uses a design that departs from the philosophy of positivism and follows a deductive mindset. The philosophy of positivism is a philosophy that states that science is the only source of true knowledge and knows no speculation, all based on empirical data. In this study using quantitative research methods. This research was conducted in the District of Papua Province. Site selection taking into account data obtained from the Central Statistics Agency which shows that poverty by province in Indonesia until 2018 is still centralized in Papua Province, with poverty rates always doubling the average national poverty rate in Indonesia.

The objects of this research are education, dependency ratio, economic growth, and poverty. Poverty variable as the dependent variable used is to use data on the percentage of poor population in 2014-2018 in the District of Papua Province. Education as an independent variable in this study by looking at the average length of school (RLS) in the District / City of Papua Province in the period 2014-2018. Dependency ratio as an independent variable in this study is a calculation obtained from the total population of non-productive age (0-14 years and 65+ years) divided by the population of productive age (15-64) years during the period 2014-2018 in the District Papua Province. Economic growth as an intervening variable in this study by looking at GRDP based on constant prices in theDistricts of Papua Province expressed in percentages during 2014-2018.

Data sources used in this study are secondary data from BPS Papua Province, Statistics Indonesia, national and international journals. The number of observations in this study were 145 data consisting of cross section data of 29 districts in Papua Province and time series data of 5 years, starting from 2014 to 2018. The data collection methods used in this study were observation and interviews in-depth interviews of several indigenous Papuans who live in Bali. Hypothesis testing in this study was carried out using path analysis and data processing using the SPSS application program. Two equations can be formulated that show the relationship between variables, namely:

$Y_1 = \beta_1 X_1 + \beta_2 X_2 + e_1$……………………………………………………………………………(1)
$Y_2 = \beta_3 X_1 + \beta_4 X_2 + \beta_5 Y_1 + e_2$……………………………………………………………………(2)

Description:
Y_1 : Economic growth
Y_2 : Poverty
X_1 : Education
X_2 : Dependency ratio
$\beta_{1,2,3,4,5}$: Regression coefficient for each variable
e   : Error

IV.   RESULTS AND DISCUSSION

1) Descriptive Analysis

In this study descriptive statistics are used to produce information about the characteristics of research variables such as minimum, maximum, mean, and standard deviation. The following results of descriptive analysis in this study are presented in Table 1.

Table 1 Results of Descriptive Analysis

	N	Minimum	Maximum	Mean	Std. Deviation
K	145	10.20	45.74	29.5414	9.85237
PE	145	.55	74.33	4.8303	11.83906
P	145	.63	11.30	5.6599	2.97173
DR	145	.29	.69	.4897	.08420
Valid N (listwise)	145				

Source: Processed data, 2019
Description:
K   : Poverty
PE   : Economic Growth
P   : Education
DR   : Dependency Ratio

Based on Table 1 it is known that the poverty variable has a minimum value of 10.20, a maximum value of 45.74, and a mean value of 29.54. This reflects that poverty in the District of Papua Province is proxied with the lowest percentage of poor population of 10.20 percent while the highest percentage of poor population is 45.74 percent. The average of the percentage of poor people in the District of Papua Province is 29.54 percent. Thus it can be seen that poverty in the District of Papua Province is still considered high to reach 29.54 percent and there is a gap between districts / cities so that there is still a percentage of poor people reaching 45.74 percent and there are only 10.20 percent.

In Table 1 it is also known that the variable of economic growth has a minimum value of 0.55, a maximum value of 74.33, and a mean value of 4.8. This reflects that economic growth in the District of Papua Province is proxied with the lowest GRDP of 0.55 trillion rupiahs while the highest is 74.33 trillion rupiahs. The average GDP of the District of Papua Province is 4.8 trillion rupiah. Thus it can be seen that economic growth in the District of Papua Province is still low because the average GRDP is only 4.8 trillion rupiahs and there is still a gap of economic growth between districts / cities because there are still districts that reach GRDP of up to 74.33 trillion rupiah while there are districts which only have a GRDP of 0.55 trillion rupiah.

Based on Table 1 it is also known that the education variable has a minimum value of 0.63, a maximum value of 11.30, and a mean value of 5.7. This reflects that education in the regencies / cities of Papua Province is proxied with the lowest Mean Years School (MYS) of 0.63 years while the largest reaches 11.30 years. The average RLS in the District of Papua Province is 5.7 years. Thus it can be seen that education in Papua Province is still low because it only has an average of MYS of 5.7 years or equivalent to graduating in grade 6 of elementary school and there is a very clear gap because there are still districts with a MYS of only 0.63 years while there are cities with MYS reaching 11.30 years. The dependency ratio variable has a minimum value of 0.29, a maximum value of 0.69, and a mean value of 0.49. This reflects that the dependency ratio in Papua Province is the lowest at 0.29 while the largest is at 0.69. The average dependency ratio in the District of Papua Province is 0.49. Thus it can be seen that the dependency ratio in Papua Province / City is still high because the average dependency ratio reaches 0.49 and there are still districts with a very high dependency ratio of 0.69.

2) Direct Effects of Research Variables

Model 1 testing was conducted to see the direct effect of education and dependency ratio on economic growth using SPSS. Following the results of the model 1 regression are presented in Table 2 and Table 3.

Table 2. Effects of Education and Dependency Ratio on Economic Growth

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.480[a]	.230	.219	10.45967

Source: Processed data, 2019

Based on Table2 it is known that RS quare is 0.23 means that 23 percent of the variation in economic growth is influenced by variations in education and dependency ratios while the remaining77 percent was influenced by other factors not included in the model.

Table 3. Results of the Effects of Education and Dependency Ratio on Economic Growth

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error	Beta		
1	(Constant)	10.986	5.549		1.980	.050
	P	1.622	.294	.407	5.512	.000
	DR	-31.319	10.388	-.223	-3.015	.003

Source: Processed data, 2019
Description:
P   : Education
DR   : Dependency Ratio

Based on the results of Table 3, equation model 1 is as follows.
$Y_1 = 0.407X_1 - 0.223X_2 + e_1$

To find out the value of e1 which shows the number of variations in economic growth that are not explained by the educational variables and the dependency ratio can be calculated with the following formula.

$$e_1 = \sqrt{1 - R^2} = \sqrt{1 - 0,230} = 0,878$$

Table 4. Results of the Effects of Education, Dependency Ratio, and Economic Growth on Poverty

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.786[a]	.618	.610	6.15243

Source: Processed data, 2019

Based on Table 4 it is known that R Square of 0.618 means that 61.8 percent of poverty variation is influenced by variations in education and dependency ratios while the remaining 38.2 percent is influenced by other factors not included in the model.

Table 5. Effects of Education, Dependency Ratio, and Economic Growth on Poverty

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error	Beta		
1	(Constant)	36.929	3.309		11.161	.000
	P	-2.335	.191	-.704	-12.244	.000
	DR	12.925	6.303	.110	2.051	.042
	PE	-.104	.049	-.124	-2.097	.038

Source: Processed data, 2019
Description:
P   : Education
DR   : Dependency Ratio
PE   : Economic Growth

Based on the results of Table 5, equation model 2 is as follows.
$Y_2 = \beta_3X_1 + \beta_4X_2 + \beta_5Y_1 + e_2$
$Y_2 = -0.704X_1 + 0.110X_2 - 0.124Y_1 + e_2$

To find out the e2 value which shows the number of poverty variations that are not explained by the education variables, dependency ratio, and economic growth can be calculated with the following formula.

$$e_2 = \sqrt{1 - R^2} = \sqrt{1 - 0,618} = 0,618$$

Based on the calculation of the total coefficient of determination, the value of the diversity of data obtained can be explained by the model that is equal to 0.705. These results indicate that 70.5 percent of the variation in poverty is influenced by models formed by education variables, dependency ratios, and economic

growth. The remaining 29.5 percent is influenced by other variables outside the model formed. Based on the regression equations of models 1 and 2 and the standard error value, a research path diagram can be made presented in Figure 3.
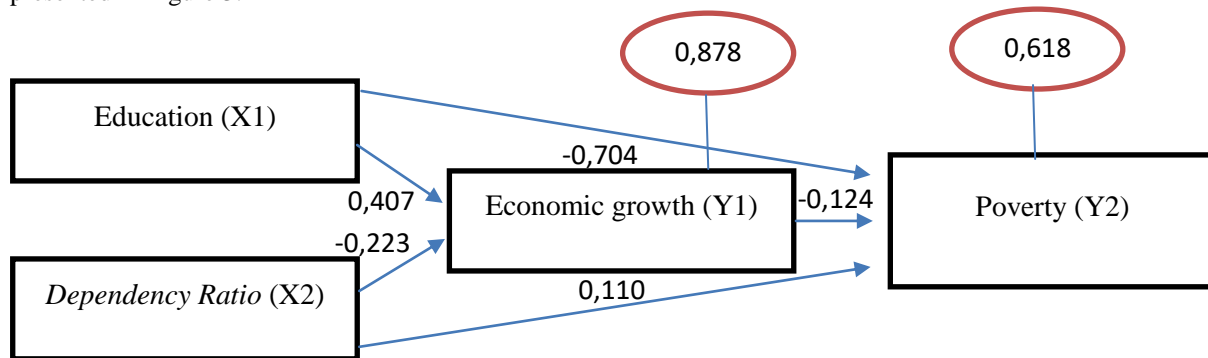

Figure3.DiagramofResearchPathAnalysisResults

Based on Figure 3, a summary of the results of direct influences, indirect effects and total inter-variables can be summarized as presented in Table 6 below.

Table 6 Results of Direct Effects, Indirect Effects, and Total Variable Effects

	Effects		Total
	Direct	**Indirect (through Y1)**	
X1 → Y1	0,407	-	0,407
X1 → Y2	-0,704	-0,050	-0,754
X2 → Y1	-0,223		-0,704
X2 → Y2	0,110	0,028	0,138
Y1 → Y2	-0,124	-	-0,124

Source: Processed data, 2019

BasedonTable6 it is known that the value of the direct influence of education on economic growth is 0.407 and the direct effect of the dependency ratio on economic growth is 0.223. The direct effect of education on poverty is 0.704 and the direct effect of the dependency ratio on poverty is 0.110. The direct effect of economic growth on poverty was 0.124. The indirect effect of education on poverty through economic growth is 0.050 and the indirect effect of the dependency ratio on poverty through economic growth is 0.028.

The results of data analysis in this study indicate that education has a positive and significant effect on economic growth. This means that an increase in the average length of school can increase gross regional domestic product. The more people who get education in a longer period of time the quality and productivity of the community will increase as well. Thus, education is the key for the community in owning and increasing knowledge, skills, quality, and productivity in the work environment which will then have an impact on increasing output and GRDP. It can be concluded that education is one of the basic assets for the community to increase regional economic growth. These results supported by Margareni et al. (2016) research that education has a positive and significant effect on economic growth in Bali province. This is consistent with the results of an interview with an informant named Christian Adiputra Kedoh who was interviewed on December 21, 2019 who stated:

"In my opinion, Yalimo District is the District with the lowest GDRP in Papua Province because the quality of education is still very low and most people work in agriculture and plantations so there are more farmers than workers engaged in services or entrepreneurs. Yalimo District is located in a mountainous area so that its people depend on agricultural products and access to Yalimo is still very difficult because it is in the highlands. "

Based on the results of these in-depth interviews, it is known that education affects one's productivity, where the better the quality of education and the higher one's education will increase the ability to manage available resources to the maximum extent possible. Thus, when the productivity of the community increases, the regional GDP will increase.

Furthermore, the results of data analysis in this study also show that the dependency ratio has a negative and significant effect on economic growth. These results are in line with research conducted by Syamsuddin (2013) which proves that the dependency ratio has a negative and significant effect on economic growth. Dependency ratio is a comparison between the number of people who are not and no longer productive to productive populations. Papua Province experienced a decline from 2014 to 2018 which means that the burden

on the productive population is lower, but there are still some districts that have a dependency ratio of more than 0.50 and the highest is in Mamberamo Raya District which reaches 0.63. Thus this percentage means that the non-productive population in Mamberamo Raya District is still too high in number than the productive population.

This is hampering economic growth because most of the income from productive residents must be allocated for the cost of living for non-productive residents, so increasing the dependency ratio will reduce economic growth. Based on the results of Rahmatullah (2015), the population of productive age has a positive and significant effect on Indonesia's economic growth. This is consistent with the results of an interview with an informant named Teresia Arta Pangestu who was interviewed on December 19, 2019 who stated:

"I totally agree if it is said that the dependency ratio is very influential on the GRDP because in Mimika District there is PT Freeport so that in my opinion the number of productive population in Mimika is more than non-productive. Therefore, Mimika District is the district that has the largest GRDP in Papua Province. Natural resources, namely our mines, are processed and that is what increases the Mimika District 's GRDP. "

Based on the results of in-depth interviews it is known that the dependency ratio affects the GRDP because a low dependency ratio means that the productive population is more numerous than the non-productive population. Thus the population has a high productivity in managing their resources so that it can ultimately increase the GRDP.

In this study, there is a negative and significant relationship between education variables on poverty. The negative relationship between these variables means that if an increase in education is proxied by the average length of schooling it will cause a decrease in poverty as proxied by the percentage of the poor population. These results are in line with the results of research by Tony Wirawan & Sudarsana Arka (2015), in the multiple linear regression test of educational variables that are proxied by the average length of schooling, it shows that education partially has a negative and significant effect on the number of poor people in Bali Province. Education plays an important factor that can help people get out of poverty. Based on the research results Wahyuni & Damayanti (2014) stated that poverty in Papua is generally caused by three variables, one of which is the level of education. Thus, the results of this study are also consistent with Inna Dariwardani (2014) study, that the higher the education level of the population, the lower the incidence of poverty.

This is consistent with the results of an interview with an informant named Insyai Rina Wareer who was interviewed on December 21, 2019 who stated:

"In my opinion, Deiyai District is the district with the highest percentage of poor population because the quality of education is still very poor, so the quality of its human resources is still very low when compared to other districts that have better education facilities and infrastructure. Residents in Deiyai work more as farmers, only depend on natural products and have not been able to manage optimally. Even the electricity condition in Deiyai District is still very limited, electricity can be used only for approximately 12 hours. It is very hindering various activities both teaching and learning, economic activities, and so forth. This Deiyai District is a remote area located in a mountainous area whose access is also limited so that it is one of the obstacles for us. "

Based on the results of these in-depth interviews, it is known that education has an effect on poverty because with education the community has more knowledge, abilities and skills in managing resources to the maximum extent possible. Educational attainment among adults is far higher in urban areas than in rural areas. This is illustrated by the condition of education in Deiyai District which still has a lower quality of education as reflected in the average length of school of only 3 years when compared to Jayapura City which has an average length of school of 11 years. Good quality education is greatly influenced by many things both in terms of facilities, infrastructure, facilities and access available so as to be able to provide proper education for the community. Thus people who already have higher education are able to increase their productivity and ultimately reduce poverty

The results of data analysis in this study note that the dependent ratio variable has a positive and significant effect on the poverty variable. This means that an increase in the dependency ratio will cause poverty to increase. These results are in line with the results of research conducted by Marmujiono (2014) which proves that the population dependency burden ratio has a positive effect on the number of poor people in Brebes District. The percentage dependency ratio illustrates how much the burden on the productive population is borne by the non-productive population. This means that the income of the productive population allocated to non-productive population increases while the number of productive population decreases so that the percentage of poor population increases.

This is consistent with the results of an interview with an informant named Ferry Gabriel Mirip who was interviewed on December 22, 2019 who argued:

"In my opinion, Merauke District as a district with the lowest percentage of poor population is indeed already happening a lot of development is almost the same as the City of Jayapura. This is because the population is increasingly dense, so that many activities carried out both economic activities and others. Then there are many job openings for the community so that it absorbs many workers and decreases the poor

population. Therefore, in my opinion in Merauke District it is more dominated by productive population compared to non-productive population."

Based on the results of in-depth interviews, it is known that the dependency ratio affects poverty. This is illustrated by the conditions in Merauke District with the smallest percentage of poor people in Papua Province who are said to have experienced a lot of development. The existence of this development encourages various activities that occur to be more effective and efficient so that the productivity of the community increases as well and absorbs a large workforce which ultimately reduces poverty.

Furthermore, in this study it can also be seen that the variable of economic growth proxied by GRDP has a negative and significant effect on poverty. The results of this study are in line with Hardinandar (2019) which proves that the GRDP has a negative and significant effect on poverty in Papua Province. This means that when there is an increase in the GRDP will cause a decrease in poverty which in this study is proxied by the percentage of the poor population. Thus it is very important to increase economic growth so as to reduce the percentage of poor people. GRDP illustrates the success of the region in managing its natural resources so that the GRDP of an area with other regions varies greatly depending on each factor of production.

This is consistent with the results of an interview with an informant named Prima Wijaya who was interviewed on December 28, 2019 who argued:

"In my opinion, because there is PT Freeport located in Mimika, the PDRB of Mimika District is very high in number. With the presence of PT Freeport, a large number of workers have been absorbed and this is what causes the percentage of poor people in Mimika District to be considered smaller than in some other districts which are still high in the percentage of poor people such as Deiyai District. With this high GRDP, the government can do a lot of infrastructure development to advance Mimika and there will be more job vacancies opening so that it can further reduce the percentage of poor people. "

Based on the results of these in-depth interviews, it is known that economic growth which is proxied by the GRDP affects the percentage of the poor population. Economic growth is an indicator of the success of development that has been achieved by an area that will later be useful as the direction of various developments (Latuny, 2014). A high GRDP illustrates the ability of a region to manage all its resources as fully as possible so as to get high income. With the GRDP, it will open up opportunities for the government to build more infrastructure for the local community so that it can increase employment and reduce the percentage of poor people.

3) Indirect Effects of Research Variables

Based on the analysis results obtained z count is equal to 2.19> 1.96 then H0 is rejected and H1 is accepted. This means that the role of education indirectly has a significant effect on poverty through economic growth. This shows that if education proxied by the average length of school experiences an increase, it will increase economic growth proxied by Gross Domestic Regional Product (GDRP) and if the GDRP has increased, it will indirectly reduce poverty in Papua Province.

Education is the most important factor that can help someone free from poverty. In the human capital theory explained that improving the quality of human resources is by increasing education. Education not only serves as a tool to get a job but will improve skills, abilities, creativity and competitiveness to deal with various changes that occur in the future. The higher the level of education of the workforce, the higher the productivity and thus will also eat a high economic growth in a country (Nugroho, 2014). So to accelerate poverty reduction, economic growth must be increased (Purnama, 2017). In this study education affects the productivity of the population, where the higher the average length of school will increase the knowledge, skills and productivity of the population in various activities. Thus this increase will encourage an increase in regional income as reflected in the GRDP so that it will reduce the percentage of poor people.

Furthermore,based ontheresultsoftheanalysisfoundthatzcountis1.84<1.96thenH0is   accepted andH1isrejectedwhichmeans thattheroleofdependencyratiodoesnotaffectpovertythrough economic growth. In this case economic growth is not an intervening variable between the influence of the dependency ratio on poverty. With the decreasing dependency ratio in the District of Papua Province illustrates the increasing number of people of productive age. However, this increase has not been accompanied by economic growth so that it has not been able to reduce the percentage of the poor population.

In the study of Knowles (2002) it is known that increasing the dependency ratio will increase the proportion of the population living in poverty. The decreasing dependency ratio shows that the number of productive population has increased and non-productive population has declined, but this has not been able to have a positive impact on poverty through economic growth. This is due to the still lack of education and the lack of various facilities and infrastructure so that the productivity of the productive age population has not been optimally absorbed.

4) Implication

Poverty is a classic problem faced by the Papua Province because the percentage of poor population in Papua Province is always twice as large as the percentage of Indonesia's poor population nationally. Poverty is a big challenge for many regions because it is a form of lack of money and goods in ensuring survival. Incidence

of poverty increased more among rural communities than urban areas (Yusuf & Sumner, 2015). The main factor in this regard is the high cost of shipping goods and services to a large number of isolated communities, due to the absence of an advanced road or river network that provides access to the interior and plateaus. The results of the analysis in this study indicate that education, dependency ratio, and economic growth directly influence poverty and education indirectly affect poverty through economic growth as an intervening variable.

Education in Papua Province has improved but is still considered poor, especially there are still some districts that have a very low average school age. This is proven by data sourced from the Central Statistics Agency, it is known that the average length of schooling of the Papua Province from 2014 to 2018 has always increased to 2018 of 5.89 or 6 years. This figure is still very far from the compulsory education set by the government. Therefore, more attention is needed from the local government to improve facilities and infrastructure in the field of education equally in each district / city especially in terms of providing adequate infrastructure in rural areas. The economy of a country depends on the productivity of labor which depends on education (Amir, 2015). An increase in the quality of education both in terms of facilities, infrastructure and infrastructure will have an impact on improving the quality of human resources. Thus, the community is able to produce or produce more goods and services. Ultimately this increase will result in increased production of goods and services which is reflected in an increase in GRDP so that it can ultimately reduce the percentage of poor people.

Dependency ratio is one indicator in assessing the economy in terms of demographics. Based on data from the Central Statistics Agency it is known that the dependency ratio in Papua Province is considered relatively high. This means that the high burden of dependents that must be borne by the productive population. Based on the results of this study it is known that the higher the dependency ratio, the lower the GRDP and the increasing percentage of the poor population. Therefore, special attention is needed from the local government to reduce the dependency ratio. This can be achieved one of them by conducting socialization about Family Planning (KB) so that more people understand and use family planning. Thus the birth rate can be suppressed and the dependency ratio will decrease.

V.   CONCLUSION

Based on the results of the discussion and description before, then some conclusions can be drawn as follows: 1) Education has a positive and significant effect on economic growth in the District of Papua Province. Dependency ratio has a negative and significant effect on economic growth in the District of Papua Province; 2) Education has a negative and significant effect on poverty in Papua Province. Dependency ratio has a positive and significant effect on poverty in the District of Papua Province. Economic growth has a negative and significant effect on poverty in Papua Province; 3) Education influences poverty through economic growth, while the dependency ratio does not affect poverty through economic growth in the Regencies / Cities of Papua Province.

Suggestions can be given based on the conclusions above, namely: 1) Education must be an important concern for the government. In connection with improving the quality of education, it is recommended to the local government to provide and improve supporting facilities and infrastructure in each District of Papua Province equally. Thus, each level of society is able to get access to education and ultimately can increase productivity and have an impact on increasing economic growth and reducing poverty; 2) Dependency ratio which is one of the important demographic indicators must be a concern of the Papua Province government. This is because the percentage of dependency ratio in Papua Province is still considered high. Thus much attention is needed from the government to be able to reduce this percentage. Some of the efforts that can be done are controlling birth rates by promoting the use of family planning and increasing infrastructure development to support economic activities in order to increase the number of jobs so as to attract many immigrants who work in Papua Province.

REFERENCES

[1]   Amir, H., Khan, M., & Bilal , Kanwal. (2015). Impact of Educated Labor Force on Economic Growth of Pakistan: A Human Capital Perspective. *European Online Journal of Natural and Social Science,* 4(4), 814-831.

[2]   Arabi, K. A. M., & Abdalla, S. Z. S. (2013). The Impact of Human Capital on Economic Growth: Empirical Evidence from Sudan. *Research in World Economy*, *4*(2), 43–53.

[3]   Aref, A. (2011). Perceived Impact of Education on Poverty Reduction in Rural Areas of Iran. *Life Science Journal*, *8*(2), 498–501.

[4]   Dao, M. Q. (2012). Government Expenditure and Growth in Developing Countries. *Progress in Development Studies*, *12*(1), 77–82.

[5]   De Silva, I., & Sumarto, S. (2015). Does Economic Growth Really Benefit the Poor? Income Distribution Dynamics and Pro-poor Growth in Indonesia. *Bulletin of Indonesian Economics Studies*, *50*(2), 227–242.

[6]   El- Mefleh, M. A., & Shotar, M. M. (2008). A Contribution to The Analysis of the Economic Growth

of Qatar. *Applied Econometrics and International Development*, 8(2), 147–154.

[7]   Emalia, Zulfa. (2013). Analisis Efektivitas Pelaksanaan Program Raskin di Kota Bandar Lampung. *Jurnal Ekonomi Kuantitatif Terapan,* 9(2), 99-107.

[8]   Fajrii, M., Delis, A., & Amzar, Y. V. (2016). Dampak Otonomi Fiskal, Pertumbuhan Ekonomi, dan Keterbukaan Daerah terhadap Ketimpangan Wilayah di Sumatera. *Jurnal Ekonomi Kuantitatif Terapan*, 9(2), 99–107.

[9]   Hardinandar, F. (2019). Determinan Kemiskinan (Studi Kasus 29 Kota/Kabupaten di Provinsi Papua). *Jurnal Riset Ekonomi Pembangunan*, 4(1), 1–12.

[10]   Inna Dariwardani, N. M. (2015). Analisis Dinamika Kemiskinan (Poverty Dynamics) di Bali Berdasarkan Data Susenas Panel 2008-2010. *Jurnal Ekonomi Kuantitatif Terapan*, 7(2), 7–15.

[11]   Kanayo, Ogujiuba. (2014). Poverty Incidence and Reduction Strategies in Nigeria: Challenges of Meeting 2015 MDG Targets. *Journal Economics*, 5(2), 201–217.

[12]   Kaur, M., & Singh, L. (2016). Knowledge in The Economic Growth of Developing Economies. *African Journal of Science, Technology, Innovation and Development*, 8(2), 205–212.

[13]   Knowles, J. C. (2002). A Look at Poverty in The Developing Countries of Asia. *Asia-Pacific Population & Policy*, 5(2), 52.

[14]   Kozak, R. S., Lombe, M., & Miller, K. (2012). Global Poverty and Hunger: An Assessment of Millennium Development Goal #1. *Journal of Poverty*, 16(4), 469–485.

[15]   Kurniawan, Robi & Managi, Shunsuke. (2018). Economic Growth and Sustainable Development in Indonesia: An Assessment. *Bulletin of Indonesian Economic Studies*, 54(3), 339–361.

[16]   Latuny, E. (2014). Analisis Sektor Unggulan di Provinsi Maluku. *Jurnal Cita Ekonomika*, 8(2), 148-157.

[17]   Margareni, N. P. Ayu Purnama., Djayastra, I K., & Murjana Yasa, I. G. W. (2016). Faktor-Faktor Yang Mempengaruhi Kemiskinan di Provinsi Bali. *PIRAMIDA*, 12(1), 101-110.

[18]   Marmujiono, Priyo Slamet. (2014). Analisis Faktor-Faktor yang Mempengaruhi Tingkat Kemiskinan dan Strategi Pengentasan Kemiskinan di Kab. Brebes Tahun 2009-2011. *Economics Development Analysis Journal*, 3(1), 159-172.

[19]   Nugroho, SBM. (2014). Pengaruh Pendidikan Terhadap Pertumbuhan Ekonomi. *Jurnal Media Ekonomi dan Manajemen*, 29(2), 195-202.

[20]   Pangiuk, A. (2018). Pengaruh Pertumbuhan Ekonomi Terhadap Penurunan Kemiskinan Di Provinsi Jambi Tahun 2009-2013. *Iltizam Journal of Shariah Economic Research*, 2(2), 44–66.

[21]   Pegkas, P. (2014). The Link between Educational Levels and Economic Growth: A Neoclassical Approach for The Case of Greece. *International Journal of Applied Economics*, 11(2), 38–54.

[22]   Purnama, N. I. (2017). Analisis Pengaruh Pertumbuhan Ekonomi Terhadap Tingkat Kemiskinan di Sumatera Utara. *Jurnal Ilmu Ekonomi Dan Studi Pembangunan*, 17(1), 62–70.

[23]   Rahmatullah. (2015). Pengaruh Penduduk Umur Produktif Terhadap Pertumbuhan Ekonomi Indonesia. *VISIPENA Journal*, 6(2), 68–87.

[24]   Samputra, P. L., & Mundandar, A. I. (2019). Korupsi, Indikator Makro Ekonomi, dan IPM terhadap Tingkat Kemiskinan di Indonesia. *Jurnal Ekonomi Kuantitatif Terapan*, 12(1), 35–46.

[25]   Saputra, R. C. (2018). Implementasi Direct AID Program Dalam Pengentasan Kemiskinan di Maluku. *E-Journal Ilmu Hubungan Internasional*, 6(1), 1–20.

[26]   Suhartini, A. M., & Yuta, R. (2015). Keterkaitan Lembaga Keuangan Mikro (LKM), Usaha Mikro dan Kecil (UMK) serta Kemiskinan di Indonesia Tahun 2012. *Jurnal Ekonomi Kuantitatif Terapan*, 7(2), 137–144.

[27]   Syahyuti. (2006). *30 Konsep Penting Dalam Pembangunan Pedesaan dan Pertanian: Penjelasan Tentang Konsep, Istilah, Teori, dan Indikator Serta Variabel.* Jakarta: Bina Rena Pariwara.

[28]   Syamsuddin, H. (2013). Analisis Pengaruh Faktor Kependudukan Terhadap Pertumbuhan Ekonomi Provinsi Jambi. *Jurnal Paradigma Ekonomika*, 1(7).

[29]   Todaro, Michael. (2008). *Pembangunan Ekonomi (Edisi Kesembilan).* Jakarta: Erlangga.

[30]   Tony Wirawan, I Made dan Arka, Sudarsana. (2015). Analisis Pengaruh Pendidikan, PDRB Per Kapita, dan Tingkat Pengangguran Terhadap Jumlah Penduduk Miskin Provinsi Bali. *E-Jurnal Ekonomi Pembangunan Universitas Udayana*, 4(5), 546-560.

[31]   Vincent, B. (2009). The Concept 'Poverty' towards Understanding in The Context of Developing Countries 'Poverty qua Poverty' with Some Comparative Evidence on Britain. *Journal of Sustainable Development*, 2(2), 3–13.

[32]   Wahyuni, R. N. T., dan Damayanti, Arie. (2014). Faktor-Faktor yang Menyebabkan Kemiskinan di Provinsi Papua. *Jurnal Ekonomi dan Pembangunan Indonesia*, 14(2), 128-144.

[33]   Windia, Wayan. (2015). Sekali Lagi Tentang Pengentasan Kemiskinan (Di Bali). *PIRAMIDA,* 11(1), 1-7. Yusuf, A. A., & Sumner, A. (2015). Growth, Poverty and Inequality under Jokowi. *Bulletin of Indonesian Economic Studies*, 52(3), 323–348