Analysis of School Participation Rates and Their Implications on Poverty Level in Mediation of Per Capita Income in Hulu Sungai Utara Regency

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ABSTRACT: Poverty is the inability to meet the minimum standard of basic needs caused by various factors such as low access to education. This study aims to analyze the effect of school enrollment rates on per capita income, the effect of school enrollment rates and per capita income on the percentage of poor people, and the effect of school enrollment rates on the percentage of poor people through per capita income. This study uses a quantitative descriptive approach. Sampling in this study uses purposive sampling. The unit of analysis is data on School Participation Rate (APS), Percentage of Poor Population, and income per capita (GDP per capita) in Hulu Sungai Utara Regency. Furthermore, the data were analyzed using descriptive analysis and inferential analysis. The results showed that there was no significant effect of the school enrollment rate on per capita income, there was a significant effect of the school enrollment rate on the percentage of the poor population, and there was no negative and statistically significant effect of the per capita income on the percentage of the poor population, there was a negative mediating effect of the variable number School participation through per capita income to the percentage of poor people.

Keywords: Education, Per capita Income, Poverty, School Participation Rate

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INTRODUCTION

Poverty is a complex problem that is not only measured by the level of income and expenditure but poverty must be viewed multi-dimensionally as a combination of the number and severity of poverty. The main dimensions of poverty are education, health, and living standards. One of the Millennium Development Goals (MDGs) programs and subsequently the Sustainable Development Goals (MDGs) agenda to be achieved in 2030, is No Poverty or eradicating all forms of poverty. However, in Indonesia, data from the Central Statistics Agency (BPS) noted that the number of poor people in Indonesia as of September 2021 reached 26.50 million people, or 9.71 percent (BPS, 2022). Even the Research Institute for Demographic and Poverty Studies (IDEAS) predicts that Indonesia's poverty rate in 2022 has the potential to jump to 10.81 percent or the equivalent of 29.3 million people (Kompas.com, 2021).

To measure poverty in Indonesia, the Central Statistics Agency (BPS) uses the concept of the ability to meet basic needs (basic need approach). With this approach, poverty is seen as an inability from an economic perspective to meet basic food and non-food needs (clothing and so on). The poor are people who have an average expenditure per person (per capita) per month below the poverty line (Sukirno, 2006). Measurement of poverty using the concept of ability to meet basic needs is not only used by the Central Statistics Agency (BPS), but also used by other countries, such as America, Pakistan, Bangladesh, Vietnam, and the Gambia. The World Bank has a poverty measurement tool by looking at the purchasing power (purchasing power) of US$ 2 per day.

Some of the differences in the measurement of poverty are caused by differences in the characteristics of the population in a country. The poverty line that is used as a threshold for determining the number of poor people is not a standard in determining a person's standard of living in a country. Although the threshold in the poverty line reflects the needs of a family, it is used as a statistical benchmark, not as a complete description of what a family needs to live.

In some countries, the calculation of the poverty line does not use the basic needs approach. In Europe, for example, the poverty line is calculated using the relative income poverty line. This poverty line ranges from 40 percent – 70 percent, where people with incomes below 60 percent are categorized as people at risk of monetary poverty. In the United States, the measurement of poverty uses a 3 component approach, namely the poverty line (calculated based on expenditures for basic household needs), cash income before taxes, and inflation. The calculation of the poverty line through the fulfillment of basic household needs is 3 times the average household expenditure on food. The determination of the amount of 3 times is based on the Household Food Consumption Survey.
In Indonesia, the level of welfare can be seen from per capita income or Gross Regional Domestic Product (GRDP) at the prevailing price. Per capita income is obtained from income in a certain year divided by the total population of an area in a certain year. Factors that cause poverty in Indonesia, include low levels of education, low health status, limited and inadequate employment opportunities, indifference to social conditions around, laziness to work, limited natural resources and capital, and so on.

The GRDP per capita of Hulu Sungai Utara Regency has an increasing trend from year to year, with an average growth of 11.68 percent of per capita income. This is in line with the trend of the poor population which has decreased from 2011-2020, as shown in Figure 1. However, based on the 2020 population census, the total population of Hulu Sungai Utara Regency is 226,727 people, with a poverty rate of 6.49 percent or equivalent to 14,718 people in 2020, but the poverty rate has increased again and in 2021, it will be 16,186 people.

![Figure 1. Percentage of Poor Population in Hulu Sungai Utara Regency](image)

**Figure 1.** Percentage of Poor Population in Hulu Sungai Utara Regency

**Source:** BPS Hulu Sungai Utara, 2021.

Education has an important role in reducing poverty both in Indonesia and any other country in the long term. Through education, one's knowledge will increase which will be useful for learning useful skills in the world of work. According to Gillies (2000), there are two reasons why education is important. First, because there is a lot of high demand for education, this happens because many people believe that higher education will provide benefits for them. Second, there are many observations that state that with a high level of education, income and social status in the community will be raised. Furthermore, Gillis (2000) revealed that the reason education is important is that with a high level of education, one's income and social position in society will be raised. On average, those who finish school earn more. Therefore, people all over the world are aware
that they are trying to get their children to get a higher education. Developing countries are now starting to pay attention to the importance of education because it is considered to increase development.

The percentage of the population according to school participation is to find out how many residents use educational facilities. The level of community welfare in an area can be reflected in the level of education of a community. One measure of the quality of human resources can be seen from the level of education completed, the more people who are highly educated, the better the quality of the population. Generally, the education level of the Indonesian population reaches secondary education. Several indicators to see school participation in an area, among others: School Participation Rate (APS), Gross Enrollment Rate (APK), and Pure Participation Rate (APM).

Educational development in Hulu Sungai Utara Regency is directed at increasing and equalizing educational opportunities, quality, relevance, and efficiency of education management. Improving education services in each region is the main key to exploring the potential and quality of human resources for community welfare. Therefore, education is the most effective means to break the chain of poverty, because education provides knowledge and skills for every member of the community to be able to improve their quality of life.

Hulu Sungai Utara Regency has a relatively high number of poor people. Based on BPS data for Hulu Sungai Utara Regency, it was stated that "The Poverty Line (GK) in March 2018 was Rp.420,783 per capita per month, higher than the Poverty Line in 2017 which was Rp. 407,608 per capita per month. The number of poor people in the Hulu Sungai Utara Regency in 2018 was around 14.91 thousand people or 6.38 percent. Even in 2021, the poverty rate has increased to 16,186 people. This shows that Hulu Sungai Utara Regency requires great attention to minimizing poverty. From these data, it can be studied further on indicators of poor households which include education, employment, housing, and others.

Human resource development through education is one of the priority programs of the Hulu Sungai Utara Regency. Indicators of development success can be seen through the Human Development Index (IPM) approach. The macro indicators used in determining the success of education are the expected length of the school and the average length of schooling. Then the analysis is continued on other macro indicators that are related to and influence these numbers, either directly or indirectly, such as the Pure Participation Rate (NER), Gross Enrollment Rate (APK), and Graduated Education Rate (APT) and School Participation Rate (APS).

In the Regional Medium-Term Development Plan (RPJMD) of Hulu Sungai Utara Regency for 2017-2022, there are still issues in the field of education
regarding the Gross Enrollment Rate (APK), Pure Participation Rate (NER), and School Participation Rate (APS) in Hulu Sungai Utara Regency. The School Participation Rate (APS) is a measure of the absorption capacity of educational institutions toward the school-age population. APS is a basic indicator that is used to see the population's access to education facilities, especially for the school-age population. APS from the age of 7-12 years, 13-15 years, and 16-18 years in Hulu Sungai Utara Regency in 2014 – 2018 experienced fluctuations. For the same period EPS 16-18 years where there is an increase and decrease. There needs to be a regulation from the local government to accelerate the 12-year compulsory education program so that the increase in APS for 16-18 years is ideal as soon as possible because the problem of 12-year fair education is positively correlated with the human development index, where the more people who complete higher education will accelerate the increase HDI numbers because the variable for higher education has a higher score.

Rahmatin, et. all (2017) in their research entitled The Effect of Poverty Levels and Number of Schools on School Participation Rates (APS) in Surabaya City, concluded that the poverty level in Surabaya has a significant effect on School Participation Rates (APS). The relationship formed is negative, where if the poverty rate increases, APA will decrease.

The measurement of the poverty line is not a reference in determining the amount of a decent standard of living in a country, but the poverty line is a statistical benchmark in calculating the number of poor people. The size of the population generated by reference to the poverty line can be a signal for the government to improve people's welfare through improving education facilities, telecommunications facilities, employment opportunities, and others so that in the long term the number of poor people can continue to decline. Based on the description above, the authors are interested in researching the analysis of the school enrollment rate and its implications for the level of poverty mediated by per capita income in the Hulu Sungai Utara Regency.

THEORETICAL REVIEW

Education and Its Role in Development

Education is a conscious effort aimed at students to become human beings with strong and intact personalities and high morals. According to Hasbullah (2017:1), education in a simple sense is defined as a human effort to foster his personality by the values of society and culture. According to the National Education System Law Number 20 of 2003, education is essentially a conscious and planned effort to create a learning atmosphere and learning process so that students actively develop their potential to have religious-spiritual strength, self-control, personality, intelligence, and noble character. As well as the skills needed
by himself, society, nation, and state. The school education path is referred to as
the formal education path. Activities related to the teaching and learning process
are carried out based on applicable regulations and take place regularly. Starting
from the curriculum, and teaching methods to evaluating teacher performance
as well as evaluating student graduation, it is carried out according to applicable
regulations (Seran, 2016:9).

Education occupies a central position in development because the goal is to
improve the quality of human resources. Hidayat (2016) states that the urgency
in an area is developed, one of which is in the industrial sector. If this is not
supported by education, it will result in the human resources owned by a region
being deemed not legally qualified or deemed not to have taken the level of
education that is considered worthy to be a partner. So education is an indicator
of developing superior human resources, which can contribute to the
development of the nation and state. Education is the basic capital of human
development.

Siagian (2000) states that the most effective vehicle for carrying out socio-
cultural development is through education in the broadest sense. This means all
the efforts made for the realization of the coveted modern society. This means
that education is formal, which takes place in educational institutions from
various levels of education, including various types of training, and is non-
formal which is held outside school.

**Educational Participation**

Educational participation is the contribution and participation of the
school-age population in education, it is influenced by how parents perceive the
value of children in the family. Participation is closely related to the value of
children in the family. Families that prioritize education, will be more concerned
with the education of their children so that the family contributes to educational
participation, on the contrary, if a family does not prioritize education, then
education is not important for the family so that the family
has not contributed optimally to educational participation.

According to Pidarta (1990:53), participation is the involvement of a person
or several people in an activity. Davis (1988:13) defines participation as the
involvement or participation of a person either individually or in groups in a
particular activity.

Amaliah (2015) said that the participation rate in education is certainly very
important for all parties because knowing the participation rate will determine
the extent to which efforts to equalize and expand access to education have been
achieved. With the participation rate, it can be seen that on any character or
variable, inequality or inequality in obtaining access to education occurs.
Moreover, the government implements a 20% education budget policy (APBN and APBD). Knowing the participation of education will determine whether the larger education budget has a positive correlation with equity and expansion of access to education at various levels of education.

According to the Ministry of Education and Culture, to find out how many people use educational facilities, it can be seen from the percentage of the population according to school participation. To see school participation in an area, several indicators are known to know it, including School Participation Rate (APS), Gross Enrollment Rate (APK), and Pure Participation Rate (APM). The Central Statistics Agency defines the School Participation Rate (APS) as the proportion of the population in a certain age group of education levels who are still in school to the population in that age group. The School Participation Rate (APS) is also a measure of the absorption capacity of educational institutions toward the school-age population. The APS is used as a basic indicator to see the population's access to education facilities, especially for the school-age population. The higher the school enrollment rate, the greater the number of people who have the opportunity to receive an education. However, the increase in APS does not always mean an increase in the distribution of opportunities for the community to receive an education APS is divided into:

a. APS 7-12 years old
   \[
   APS = \frac{\text{Number of children aged 7-12 years who are in elementary school} + \text{MI} + \text{SMP} + \text{MTs}}{\text{Total Population Age 7 - 12 years}} \times 100\%
   \]

b. APS 13-15 years old
   \[
   APS = \frac{\text{Number of children aged 13-15 years who are in elementary school} + \text{MI} + \text{SMP} + \text{MTs} + \text{SMA} + \text{SMK} + \text{MA}}{\text{Total Population Age 13 - 15 years}} \times 100\%
   \]

c. APS aged 16-18 years old
   \[
   APS = \frac{\text{Number of children aged 16-18 years who are in elementary school} + \text{MI} + \text{SMP} + \text{MTs} + \text{SMA} + \text{SMK} + \text{MA}}{\text{Total Population Age 16 - 18 years}} \times 100\%
   \]

**Poverty and Per capita Income**

The Central Statistics Agency (BPS) explains that poverty is the inability to meet minimum standards of needs, both food, and non-food needs. According to BPS, poverty is a condition of a person who is only able to meet their food needs of less than 2100 calories per capita per day (BPS, 2018).
According to Seran (2016:127), poverty is defined as a condition, which illustrates that the income earned by a group of residents in an area/region at a certain time does not meet the minimum standard of needs.

Niemietz in Maipita (2014) states that poverty is the inability to buy necessities such as food, clothing, shelter, and medicine. Furthermore, it is interpreted that poverty is a condition where basic needs or basic needs are not fulfilled so that a decent standard of living is not achieved. The basic needs in question are food, clothing, housing or shelter, education, and health.

In Indonesia, through BPS, measuring poverty uses the basic needs approach, namely the ability to meet basic needs. With this approach, poverty is seen as an economic inability to meet basic food and non-food needs as measured from the expenditure side. The two components of the poverty line are used as the main component to calculate the minimum needs. According to BPS, the percentage of poor people is the percentage of the population whose consumption levels are below the poverty line. A person is categorized as poor if the amount of real per capita expenditure per month does not exceed the poverty line. People who do not have jobs, and do not have income, are automatically categorized as poor people (Seran, 2016: 131). So, the poor are people who have an average monthly per capita expenditure below the poverty line. Meanwhile, the Percentage of the Poor (PPM) is the percentage of the population below the poverty line (GK).

Todaro (2000) defines economic growth as an increase in the per capita output of material goods over some time. According to Buchanan Ellis, economic growth means the development of the real income potential of developing countries by using investments that will bring about various changes and enlarge productive sources which in turn increase per capita income. Per capita income is obtained through the total regional income (GRDP) divided by the total population of the region.

**Education, Income, and Poverty Reduction**

Todaro (2006: 434) states that education is a fundamental development goal. Furthermore, according to the World Bank (2013) (in Nirwana, 2013) education is one of the most powerful instruments for reducing poverty. Jeffrey Sachs in his book The End of Poverty reveals that one of the mechanisms in poverty alleviation is the development of human capital, especially education and health (Sachs, 2005:245-265). Nozick and Jeffrey Sachs propose six poverty alleviation packages, namely: 1) Human capital, especially in health, nutrition, and skills acquired through education and training. 2) Business capital, the necessary means of transportation for agriculture, industry, and services. 3) Infrastructure: roads, electricity, drinking water. Sanitation, etc. 4) Natural capital in the form of
agricultural land and biodiversity. 5) Capital public institutions such as commercial law, judicial law, and government services. 6) Science capital is in the form of scientific and technological know-how that increases productivity which can increase natural capital.

From this opinion, it appears that this economic approach sees the problem of education as a means to increase productivity. Poverty alleviation can not only be achieved through the development of one particular sector but also various important sectors related to the interests of the people at large. Education level is an important factor influencing income distribution and poverty. Psacharopoulos in Kokila (2000), has emphasized the role of education in reducing inequality and poverty. This is in line with De Janvry and Sadoulet in Kokila (2000) who states that education reduces inequality and poverty directly, namely: by increasing productivity for the poor, improving their opportunities to get jobs with better wages, and opening vertical links for their children. Indirectly, education gives the poor more ability to earn their share of the total income.

According to Gillies (2000) the reason education is important is that, with a high level of education, a person's income and social position in society will be raised. On average, those who finish school earn more. Therefore, people all over the world are aware that they are trying to get their children to get a higher education. Developing countries are now starting to pay attention to the importance of education because it is considered to increase development.

METHODOLOGY

The method used in this research is a quantitative approach. The units analyzed are the percentage of poor people (PPM), Gross Participation Rate (APK), Pure Participation Rate (APM), School Participation Rate (APS), and Per capita Income (PDRB Per capita).

The population in this study is data on School Participation Rate (APS), Percentage of Poor Population, and income per capita (GDP per capita) in Hulu Sungai Utara Regency. The sampling in this study used a purposive sampling technique in the form of data on school enrollment rates (APS), percentage of poor people, and per capita income (GRDP per capita) in Hulu Sungai Utara Regency during 2013-2019.

Data was collected using interviews and documentation through the form, reports, and other publications from relevant agencies and agencies that have to do with the problem being studied. Furthermore, data analysis is carried out using the Analysis Technique Descriptive and Inferential Analysis Techniques.

RESULTS AND DISCUSSION

The results of the path coefficient test (path analysis) Model I and Model II, are:
Path Coefficient (Path Analysis) Model I

Coefficients

<table>
<thead>
<tr>
<th>Model</th>
<th>Unstandardized Coefficients</th>
<th>Standardized Coefficients</th>
</tr>
</thead>
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<tr>
<td></td>
<td>B</td>
<td>Std. Error</td>
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<tr>
<td>(Constant)</td>
<td>-19407971,690</td>
<td>49790136,80</td>
</tr>
<tr>
<td>X</td>
<td>421563,193</td>
<td>578582,828</td>
</tr>
</tbody>
</table>

a. Dependent Variable: M

Model Summary

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<th>Adjusted R Square</th>
<th>Std. Error of the Estimate</th>
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</thead>
<tbody>
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<td>.096</td>
<td>-.085</td>
<td>3010440,614</td>
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</tbody>
</table>

a. Predictors: (Constant), X

Based on the output of Regression Model I, it can be seen that the significance value of the variable X = 0.499 is greater than 0.05.

Path Coefficient (Path Analysis) (Model II)

Coefficients

<table>
<thead>
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<th>Unstandardized Coefficients</th>
<th>Standardized Coefficients</th>
</tr>
</thead>
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<tr>
<td>X</td>
<td>0,055</td>
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<tr>
<td>M</td>
<td>-8,872E-08</td>
<td>-989</td>
</tr>
</tbody>
</table>

a. Dependent Variable: Y

Model Summary
Based on the output of Regression Model II in the Coefficients table section, it is known that the significance value of the two variables, namely X = 0.048, and M = 0.004 is smaller than 0.05.

**Sobel test on variables X through M against Y**

Sobel's test on the APS variable (X) through Per capita Income (M) to the Percentage of the Poor (Y), are:

\[
ab Test = \sqrt{(b^2 SE_a^2) + (a^2 SE_b^2)}
\]

\[
\text{Test} = \sqrt{(-8.872^2 \times 578582.828^2) + (421563.193^2 \times 0.002^2)}
\]

\[
\text{Test} = -0.0007
\]

From the results of the Sobel test calculation above, the Sc value is -0.001, because the Sc (Tcount) > Ttable obtained is -0.001 > -2.776 with a significance level of 5%.

**The Effect of School Enrollment Rate (APS) on Per capita Income**

School Enrollment Rate is the ratio between the number of people of a certain age who are in school with the entire population according to the same age group.

The results of quantitative calculations for the effect of the School Participation Rate on Per capita Income according to the T test, the T Count value is 0.729 while the T Table is 2.571 because Tcount < T table (0.729 < 2.571) with a significance of 0.499 > 0.05 meaning that there is no significant effect of the Participation Rate Schools on Per capita Income. This shows that the rise and fall of the APS value do not affect the rise and fall of per capita income.
The Effect of School Enrollment Rate (APS) on the Percentage of Poor Population in Hulu Sungai Utara Regency

The School Enrollment Rate shows the proportion of all children who are still in school in a certain age group to the population of the appropriate age group. APS is a measure of the power, equity, and access of the education system to the school-age population.

The results of the calculations carried out on the T test on the variable School Participation Rate (APS) to the Percentage of the Poor Population, the T Count is 2.823 while the T Table is 2.776. Because Tcount > Ttable (2.823 > 2.776) with a significance of 0.048 < 0.05, it means that there is a significant effect of APS on the percentage of the poor population. This means that the high APS value affects the increase in the percentage of poor people in the Hulu Sungai Utara Regency.

The Effect of Per capita Income on the Percentage of Poor Population in Hulu Sungai Utara Regency

The results of the test with linear regression, obtained the T test, namely T Count of -0.749 while T Table of -6.148 while T Table of 2.776 because Tcount < T table (-6.148 < -2.776) with a significance of 0.004 < 0.05, it means that there is no negative effect and statistically significant from per capita income to the percentage of poor people. This shows that the increase in per capita income does not affect the decrease in the percentage of poor people in the Hulu Sungai Utara Regency.

The Effect of School Enrollment Rate (APS) on the Percentage of Poor Population through Per capita Income in Hulu Sungai Utara Regency

The results of calculations using Path Coefficient Analysis (path analysis) obtained that the effect of APS through Per capita Income on the Percentage of the Poor, it can be seen that the direct effect given by APS on the Percentage of the Poor is 0.454. while the indirect effect of APS through Per capita Income on the Percentage of the Poor is -0.449. Then the total effect is 0.004. Based on the calculation results above, it is known that the direct influence value is 0.454 and the indirect effect is -0.449, which means that the direct influence of APS on the Percentage of the Poor has a positive influence and the indirect effect of APS through Per capita Income on the Percentage of the Poor has a negative effect.

Furthermore, the results of the Sobel test show a T Count value of -0.001, because the value of Sc (Tcount) > Ttable obtained is -0.000 > -2.776 with a significance level of 5%, so it can be concluded that there is a negative mediating effect of the APS variable through per capita income. to Percentage of Poor Population. This means that an increase in the School Participation Rate (APS)
through per capita income will reduce the percentage of poor people in the Hulu Sungai Utara Regency.

CONCLUSIONS AND RECOMMENDATIONS

Referring to the results of research, analysis, and discussion, the following conclusions can be drawn; (1) There is no significant effect of the School Participation Rate on Per capita Income, which means that the rise and fall of the APS value do not affect the rise and fall of per capita income, (2) There is a significant effect of the APS on the Percentage of the Poor Population, meaning that the high APS value affects the increase the percentage of poor people in Hulu Sungai Utara Regency, (3) There is no significant effect of per capita income on the percentage of poor people, meaning that an increase in Per capita income does not affect decreasing the percentage of poor people in Hulu Sungai Utara Regency, and (4) There is a negative effect of mediation from APS variable through per capita income to the percentage of poor people in Hulu Sungai Utara Regency. This means that an increase in the School Participation Rate (APS) through per capita income is followed by a decrease in the percentage of the poor.

We suggest that the Regional Government can conduct a deeper review of education in Hulu Sungai Utara Regency because the research results for the education participation factor in 2013-2019 are still quite low. Likewise, conducting a more in-depth review of poverty in Hulu Sungai Utara Regency.

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