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## ARTICLE

# Investment in Human Resources to Increase Achievement Levels of Sustainable Development

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**Abstract:** The quality of life of a country or region describes the welfare of the people and the success of programs made by the government to improve the degree of human life. Life expectancy is one of the indicators used to assess the population's health status that describes the quality of life. In contrast, education is the basis for poverty alleviation and economic growth. Education and health are fundamental to building wider human capacities and are at the core of the meaning of development. This research was conducted to test the effect of poverty and education on public health in the city of Palembang. Secondary data sourced from the Central Statistics Agency in 2010–2019 were analyzed using multiple regression with Eviews 9 analysis software. The dependent variable is Life Expectancy as a proxy for public health rates. The independent variable is the average length of schooling as a proxy indicator of education and the number of poor people. This study shows that poverty is negatively correlated with public health. In contrast, the direction of education is negative, so it can be concluded that education has no significant effect on public health. Poverty and education are factors that determine the level of public health in the city of Palembang, where the higher the education and the decrease in poverty, the higher the public health. In order to approach better public health status in Palembang City, poverty is reduced by reducing unemployment and increasing education through skills training.

**Keywords:** life expectancy; public health; poverty; education

## 1. Introduction

Economic development shapes humans as resources and places humans as subjects, not objects (Human-Centered Development). The population is the real wealth of a nation. Many factors influence population development both in quality and quantity. Not just talking about development alone, but also understanding quality development with minimal risk with extraordinary benefits for the community. The quality of life of a country or region describes the welfare of the people and the success of programs made by the government to improve the degree of human life. Regarding the quality of life, there is an element of life expectancy. Life expectancy is one of the indicators used to assess the health status of the population that describes the quality of life, and while education is the basis for poverty alleviation and economic growth (Anggadini, 2015).

A country is said to be developed not only calculated from the gross domestic product but also includes aspects of life expectancy that reflect the health of the people and the education of the people. Life expectancy is the main indicator of public health, which all countries want to achieve (Tafran et al., 2020). Uncovering socioeconomic determinants is the key to extending life expectancy. In this regard, the basic development goals are education and human health (Todaro & Smith, 2011). Education and health are fundamental to building wider human capacities and are at the core of the meaning of development. Apart from education, poverty is also related to health. Wagstaff's classical conceptual framework on the vicious cycle of poverty and health proposed by Wagstaff illustrates that poor health affects an individual's financial status through loss of income and increased vulnerability to high health care costs. In contrast, poverty leads to poor and poor people suffering from various types of health.

On the other hand, investment in human resources will increase the achievement of the Sustainable Development Goals (SDGs) targets, namely, a development that maintains sustainable improvement in the community's economic welfare. This development maintains the sustainability of community social life, a development that maintains environmental quality. Life and development that ensures justice and the implementation of governance can support an increase in the quality of life from one generation to the next. The SDGs are global and national commitments to improve the community's welfare, including 17 goals, one of which is "without poverty." Efforts to achieve the SDGs targets are a national development priority, requiring synergy of planning policies at the national and provincial and district/city levels. The SDGs targets at the national level are in line with the 2015-2019 National Medium Term Development Plan in the form of programs, activities, measurable indicators, and indications of their financing support. The SDGs are a refinement of the more comprehensive Millennium Development Goals (MDGs) by involving more developed and developing countries, expanding funding sources, emphasizing human rights inclusively with Community Organizations and the media. Philanthropy and Business Actors, as well as Academics and Experts. This causes many countries to place education and health as the primary concern in the development process. besides, that education and health are interesting topics to study.

Achievements in the education and health sectors have a big role as an engine of growth and development to improve equitable social welfare in a country. In Indonesia, a geographically unique country, economic growth was relatively higher after undergoing the big bang process of decentralization in 2001, and the poverty rate decreased. Moreover, since 2000 Millennium Development Goals of 8 targeted goals, five of which are related to education and health; in the last decades, the government has massively tried to achieve these targets, education and health outcome indicators have shown better performance. However, Indonesia still faces many challenges and problems, including those related to the level of poverty and inequality that is still widening. According to BPS data, the average length of schooling in Indonesia in 2019 was 8.58, an increase from 2018, 8.58. Then the number of poor people decreased

from 25,674,580 people in 2018 to 24,785,870 people in 2019. After that, the life expectancy in 2019 for men was 69.44 years, and for women were 73.33 years.

The highest contributor to poverty is the low level of education (Erlyn et al., 2021). The level of education has a negative and significant effect on poverty, meaning that the higher a person's level of education, the knowledge and skills will also increase to increase work productivity and reduce poverty. However, education (mean length of schooling) partially has no significant effect on poverty in Indonesia (Putra & Arka, 2018). Education in many countries is a way to escape poverty. Where it is described as a poor person who expects a good job, he must have a high level of education. But higher education can only be achieved by the rich. Meanwhile, the poor do not have enough money to pay for education up to higher levels, such as secondary schools and universities, so the level of education is very influential in overcoming the problem of poverty (Todaro & Smith, 2011). Meanwhile, economic growth and poverty have a very strong correlation because the poverty rate increases in the early stages of development. When approaching the final stage, the number of disaster-poor people decreases (Didu & Fauzi, 2016). An increase in economic growth will reduce the poverty rate. This relationship shows the importance of economic growth to reduce poverty. Building a people's economy will encourage equitable economic growth based on innovation and creativity, and high competitiveness that can be driven by the community while reducing poverty (Hidayat et al., 2022). Poverty rates and education levels on economic development have been widely studied in the literature. However, how poverty and education affect public health has not been studied much.

## 2. Methods

This research was a secondary data analysis based on Statistics Indonesia data in 2010-2019. This data analysis uses multiple regression with Eviews 9 analysis software. The dependent variable in this study is Life Expectancy as a proxy for public health rates. The independent variable is the average length of schooling as a proxy for education indicators and the number of poor people. The increasing quality of public health is indicated by life expectancy (Anggadini, 2015).

Multiple regression analyzes the relationship between the dependent variable response in this case Y and the predictor in this case X and aims to make predictions and measure the level of influence through regression coefficients (Hoaglin, 2016). In the theory of multiple regression equations, it is written as follows:

$$Y = \beta_0 + \beta_1.X_1 + \dots + \beta_2.X_2 + \varepsilon \dots\dots\dots (1)$$

where Y is the dependent variable, 1 and 2 are independent variables, is an error and X1 and X2 are constants.

In this study, the relationship between the dependent and independent variables can be formulated with the following equation:

$$\text{Public Health} = \beta_0 + \text{Poverty}.X_1 + \text{Education}.X_2 + \varepsilon \dots\dots\dots (2)$$

Based on the hypothesis, there is an influence and relationship of health factors on poverty and education.

Several assumptions must be met in performing regression testing, namely classical assumptions, and normality. This classical assumption test uses the assumption of multicollinearity, heteroscedasticity, and autocorrelation.

## 3. Results and Discussion

The data used in this study was life expectancy obtained from the Central Statistics Agency for 2010-2019. Life expectancy is the average number of newborns expected to live when the current mortality rate is used. Life expectancy indicators are influenced by indicators of the quality of medical services, behavioral risk factors,

### Life Expectancy

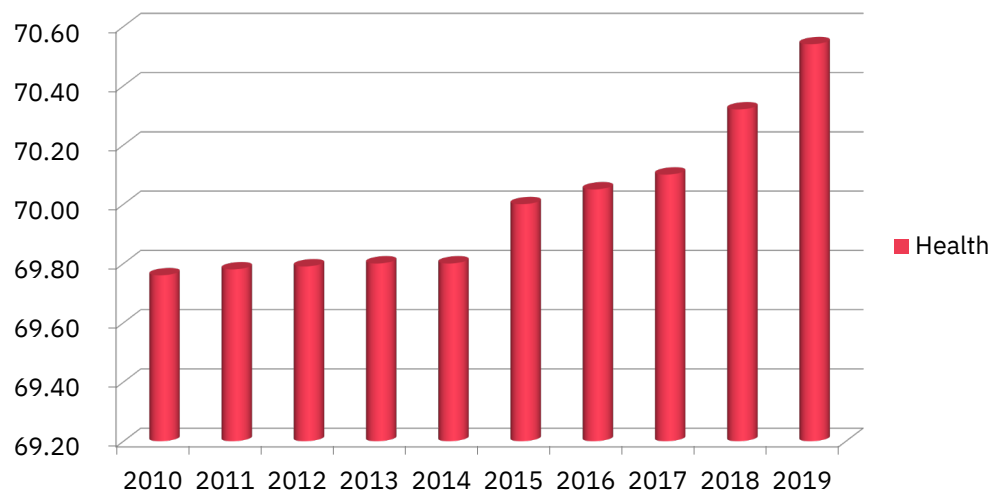


Figure 1.

health insurance, per capita income, education level, estimated current year conditions, and current-year estimates (Lichtenberg, 2011).

Based on Figure 1, it can be seen that the life expectancy in the city of Palembang has increased every year. In 2010 the life expectancy was 69.76, then in 2019, it reached 70.54. This shows that the community's quality of life is increasing and improving. The average life expectancy tends to increase each year. This can be influenced by socio-economic status and lifestyle; lifestyle also has a role in body metabolism (Marques-Rocha et al., 2016). Healthy lifestyle choices have more impact than a single lifestyle factor (Tuckett & Henwood, 2015). Many things are behind the life expectancy in an area in a high or low position. High or low life expectancy can be caused by various things, such as GDP per capita, the average length of schooling, number of doctors, and clean and healthy living behavior. The success of health programs and socio-economic development, in general, can be seen in the improvement of health services, clean and healthy living behavior, income which is described in gross regional domestic income, education level is described in the average length of schooling, and the description of health facilities seen from the number of doctors scattered.

The family has an important role in improving the quality of public health because, in the family, there is communication and interaction between family members, which is an important beginning of a behavioral education process (Greenberg et al., 2017). Implementation of clean and healthy living behavior from an early age in the family can create a healthy and active family in every health effort in the community. A person's clean and healthy living behavior is closely related to improving the health of individuals, families, communities, and the environment. In addition, if the parenting pattern and the provision of nutritional intake are not good, the child can experience stunting and a lack of nutrition in pregnancy, and poor lactation will affect the growth and brain of the child (Erlyn et al., 2021).

Health is intrinsically linked to lifestyle choices, and choosing a healthy lifestyle is an important part of health outcomes. If you do an unhealthy lifestyle, it can cause problems (Wärdig et al., 2013). In particular, healthy lifestyle behaviors have received more attention as the focus of public health shifts from treatment to disease prevention (Kim & Baek, 2019). The clean and healthy living behavior program in the household is an effort to empower household members to know, be willing, and be able to practice clean and healthy living behaviors and play an active role in the health movement in the community. Clean and healthy living behavior is carried out to achieve a clean and healthy household. A person's clean and healthy living behavior is closely related to improving the health of individuals, families, communities, and the

environment. It is known that an individual's health status is closely related to his behavior; the better the behavior related to health, the better his health status (Umaroh et al., 2016).

According to Central Statistics Agency, the average length of schooling is the number of years residents use in undergoing normal education, which is used to determine the quality of public education in an area. The indicators for the average length of schooling and expected years of schooling are components in measuring the Human Development Index (HDI). This estimate of the average length of schooling is based on years of schooling at various levels of education. In contrast, the expected length of schooling is estimated with children enrolling in school and school-age in the community (Alkire & Santos, 2011). Problems in achieving the average number of years of schooling in Indonesia are income inequality, access to education services, competence, and quality of education between private and public (Muttaqin, 2018). In addition, the average length of schooling affects improving health (Feinstein et al., 2006), economic growth (Arnedo, 2013), and human capital (Fleischhauer, 2007).

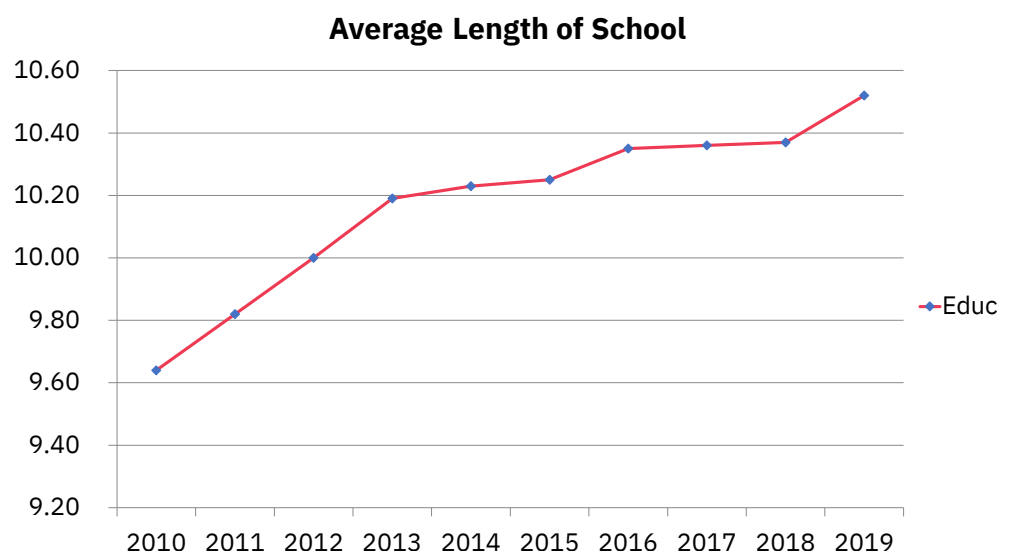


Figure 2.

Based on Figure 2, it can be seen that the average length of schooling in the city of Palembang has increased every year. In 2010 the average length of schooling was 9.64, then in 2019, it reached 10.52. This shows that the average length of schooling is increasing and improving. Education is the most basic need for everyone because an educated society can at least have the ability to free itself from poverty. Everyone needs more and better education (Young, 1976). The level of education can be used as an indicator to see the level of community welfare. The higher a person's education level, the better the quality of his human resources (Purnastuti et al., 2013). Education is the most important factor that can get someone out of poverty. The link between poverty and education is very large because education provides the ability to develop through mastery of knowledge and skills (Suryandari, 2017).

Based on Government Regulation of the Republic of Indonesia No. 47 of 2008 concerning compulsory education, the government has launched a compulsory education program for elementary school-aged children 7–12 years which aims to provide a minimal education for Indonesian citizens to be able to develop their potential so that they can live independently in society or continue to higher education levels. The implementation of twelve years of basic education is one of the ways or efforts made by the government to meet the demands of the world of work. Leaders in educational institutions must also consider several things in making educational regulations because they involve the needs of children, namely education (Toson et al., 2013). A high level of education will provide the ability for high school graduates to

make quality human resources and provide production effectiveness which can ultimately contribute to the economic growth of a region (Suaiah & Cahyono, 2013).

Poverty is a strategic indicator used to measure the success of the development. Poverty is calculated annually by the Central Statistics Agency based on a national socio-economic survey. The number and percentage of poor people in Palembang from year to year are shown as follows:

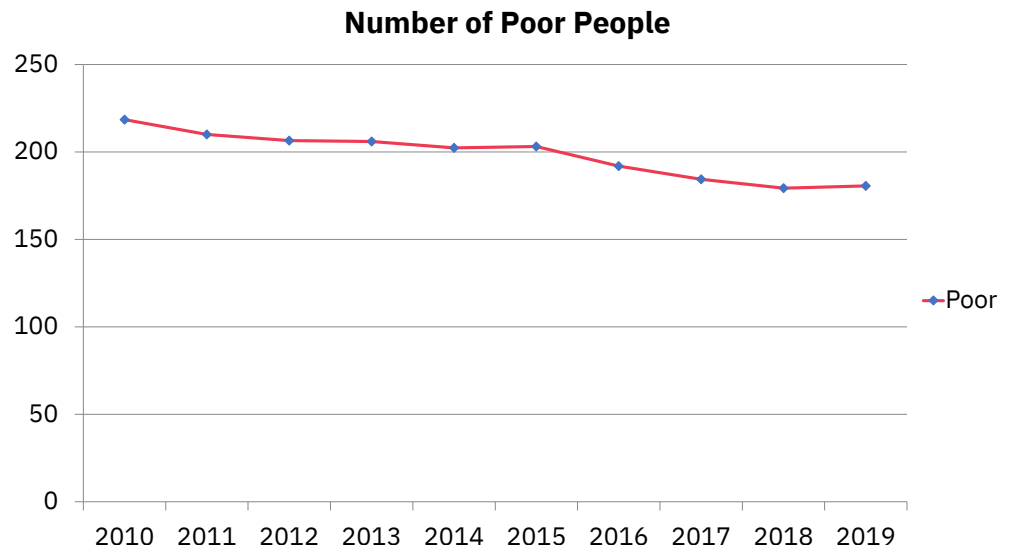


Figure 3.

Based on Figure 3, it can be seen that the number of poor people in Palembang City has decreased every year. In 2010 the average length of schooling was 218,500 people, then in 2019, it fell to 180,670 people. This shows that people's welfare is increasing and improving. According to Central Statistics Agency, poverty is an individual's inability to meet the minimum basic needs for a decent life (food and non-food). In conducting poverty analysis, there are two concepts, namely absolute and relative poverty. Absolute poverty is a situation where the basic needs of an individual cannot be met, in other words, the lack of services and basic needs (related to food, housing, and clothing). While relative poverty lies in a phenomenon in society, in this perspective, a person is said to be poor when the situation is unfavorable financially and socially with other people in their environment. The concept of relative poverty is related to inequality (Felangi & Yasa, 2021).

In addition, there are two indicators in measuring poverty, namely indicators related to economic and non-economic. Poverty indicators related to the economy are measures of poverty that use income or poverty data in measuring welfare. Then the measurement with this economic indicator is not only related to income data but with other indicators such as health, nutrition, and education. This non-economic indicator is related to the poverty line (Christiaensen et al., 2002).

Then the World Bank formulates the determinants of poverty. These determinants of poverty include regional characteristics (weather, inequality, and local government and management), community characteristics (infrastructure, capital, and community structure and access to goods and services), household characteristics (assets, household size, health, and average education). in the household, occupation and

**Table 1.** Estimated Results of Public Health Outcomes in the Education and Poverty Sector

Variable	Coefficient	Std. Error	t-Statistic	Prob.
C	4.947	0.3175	1.558	0.000
LnPOOR	-0.055 ***	0.0181	-3.021	0.019
LnEDUC	-0.129	0.045	-0.285	0.783

Significant at 10%

\*\* Significant at 5%, 10%

\*\*\* Significant at 1%, 5%, 10%

income, and average adults in the household) and individual characteristics (age, education, employment status, health status, and ethnicity).

The results (Table 1) of the multiple regression estimation calculation are explained by the following equation:

$$\text{LnPublicHealth} = 4,947 - 0.055 \text{ LnPoor} - 0.129 \text{ LnEduc} + \dots (3)$$

The above equation can be interpreted as follows:

1. 0 is 4,947, which means if LnPoor and LnEduc are zero percent, then LnHealth will be worth 4,947 percent
2. The LnPoor coefficient is -0.055, which means that if there is a change in the increase in poverty by 1 percent (assuming other variables are constant), then health will decrease by 0.055 percent
3. The LnEduc coefficient is -0.129 with a negative direction, so it can be concluded that partially the LnEduc variable has no significant effect on LnHealth. The effect of the LnEduc variable on the dependent variable LnPublicHealth because the value of prob. t count of 0.783 which is greater than 0.05, so it can be told that the LnEduc variable has no significant effect on the LnPublicHealth variable, in other words, education has no significant effect on public health.

**Table 2.** Statistical Hypothesis Testing Results

R-squared	0.820	Mean dependent var	4.248
Adjusted R-squared	0.768	S.D. dependent var	0.004
S.E. of regression	0.002	Akaike info criterion	-9.533
Sum squared resid	2.330	Schwarz criterion	-9.442
Log likelihood	50.665	Hannan-Quinn criter.	-9.632
F-statistic	15.966	Durbin-Watson stat	1.603
Prob(F-statistic)	0.003***		

Significant at 10%

\*\* Significant at 5%, 10%

\*\*\* Significant at 1%, 5%, 10%

Based on Table 2, it is found that the R-squared value in the regression equation is 0.820 indicating the proportion of the influence of the LnPoor and LnEduc variables on the LnPublicHealth variable is 82%. This means that poverty and education have a proportion of influence on public health by 82%, while other variables influence the remaining 18%, not in the regression model. In addition, the value of prob. F (Statistic) of 0.003 is smaller than the significance level of 0.05, so it can be concluded that the estimated regression model is feasible to use to explain the effect of poverty and education on public health.

Thus, partially on each variable, it can be explained that the influence of LnPoor in influencing public health as evidenced in a regression analysis where the coefficient value of the poor variable is 0.055 with a negative direction of influence, so it is concluded that partially the poor variable has a significant effect on health with a negative direction of influence. This regression equation shows that poverty has a negative effect on public health, which means that an increase in poverty can reduce the achievement of public health rates, especially the life expectancy of an individual. This regression test results follow several studies that state that life expectancy negatively affects poverty. The people with high poverty and income inequality have a lower life expectancy with multimorbidity (Guimarães & Andrade, 2020). This is because people at risk of poverty are the most likely to have a life expectancy that is indirectly affected by health, including lifelong and intergenerational impacts of impaired health, education, nutrition, and employment (Gibson & Olivia, 2020). This indirect effect occurs through lower-income, affecting health and life expectancy. The level of community productivity that increases can encourage the rate of economic



growth, which in turn will reduce the poverty rate, meaning that the higher the life expectancy, the poverty rate will decrease (Anggadini, 2015).

As for the Educ variable, which is an independent variable that has a significant effect on health and shows a positive direction of influence (Cohen & Leker, 2014), the resulting economic contraction is accompanied by an increase in income inequality, partly due to poor job prospects for people with low levels of education and affected, while the occupations of those with higher education were less affected (Furceri et al., 2021). Adults with lower education, higher poverty rates, manual work, and rental housing have significantly lower life expectancies than their peers with higher socio-economic positions (Singh & Lee, 2020). Improving public education by supporting education, training, community literacy, and professional and technical qualifications for the poor, so they can find work, participate in economic growth, and benefit directly from this process (Tri, 2020). In reducing poverty also by reducing unemployment. Poverty alleviation efforts must be carried out comprehensively, covering various aspects of people's lives, and integrated (Wahyuningsih et al., 2020). An increase in the informal sector is needed to reduce unemployment and poverty because the informal sector is the main solution to overcome these problems. Also, increasing production capacity for the poor, poor areas is the root to ensure sustainable poverty reduction (Tri, 2020).

Many things are behind the life expectancy in an area in a high or low position. The success of health programs and socio-economic development, in general, can be seen in the improvement of health services, clean and healthy living behavior, education, and income which is described in gross regional domestic income. The existence of health facilities is very decisive in health recovery services, prevention of disease, treatment, and nursing for groups and communities that require health services. Availability of facilities is influenced by location factors, namely easy to reach or not. The form of health services is not only limited to service facilities but also includes health workers. The existence of health workers can provide services, information, and motivation to the community to visit health facilities. Health facilities that refer to physical conditions both in quality and quantity are also crucial in ensuring public health.

Not only about health which supports life expectancy in an area, clean and healthy living behavior of the community also has a significant influence and role on the degree of public health because whether or not the environment is healthy, but the health of individuals, families, and communities also depends on human behavior itself. Changing people's behavior is not easy, but it is very necessary to improve people's health status. In order to minimize the occurrence of disease or health problems as a result of an unhealthy environment, various efforts have been made to improve the quality of the environment. Some indicators that describe environmental conditions include healthy homes, clean water, sanitation facilities (wastewater disposal, trash cans, and latrine ownership), public places and food management, and waste treatment facilities in health care facilities. Clean water is a very important need for households in daily life. Availability in sufficient quantities, especially for drinking and cooking purposes, is the goal of the clean water supply program that the government is continuously pursuing.

Life expectancy in an area is expected to increase each period significantly. Not many people know about the importance of life expectancy itself, especially those with relatively low education. Education is one way to guarantee and improve the quality of human life economically and socially and a way to overcome inequality to achieve equality and realize a prosperous life. Education and health are fundamental development goals. A higher level of education will ensure continuous improvement in the technology used by society (Dwi Atmanti, 2005). A person's education will influence responding to something that comes from outside. With a higher level of education, it is hoped that a person will find it easier to absorb, choose, adapt or develop all forms of new information and knowledge for his life.



A high average length of schooling can change people's mindsets for the better than before. The length of the school will increase people's knowledge to carry out clean and healthy living behaviors. There is a significant positive relationship between education level and clean and healthy living behavior. If the average length of schooling increases, clean and healthy living behavior will also increase (Meik et al., 2018). The average length of schooling in the community will increase knowledge to extend life expectancy. There is a positive relationship between education and life expectancy, indicating that people who have completed at least nine years of education tend to live longer (Lager & Torssander, 2012).

An increase in economic growth will reduce poverty levels because there is a negative relationship between economic growth and poverty levels (Didu & Fauzi, 2016). This relationship shows the importance of accelerating economic growth to reduce poverty levels. Other factors that influence poverty, apart from economic growth, are also economic development. The development is a physical reality and the determination of society to strive as hard as possible through a series of combinations of social, economic, and institutional processes to achieve a better life (Todaro & Smith, 2011). Amartya Sen helps clarify why development economists have placed such a clear emphasis on health and education and cite countries with high-income levels but low health and education standards as a case of growth without development (Todaro & Smith, 2011). Real income is very important indeed, but converting the characteristics of commodities into appropriate functions, in many important ways, obviously requires education and health, and income. Sen's analysis is part of what the United Nations calls the Human Development Index (HDI).

The measure of poverty that is often used to see poverty in an area is the incidence of poverty. The incidence of poverty can be defined as the percentage of the population whose income (or income proxy) is less than the amount needed to meet the basic needs of life. However, poverty has many dimensions other than the income dimension. Another dimension of poverty can be seen from the opportunity to obtain health and long life, having knowledge and skills, and others. The point is that poverty is closely related to the narrowness of a person's opportunity in determining his choices in life. If poverty is related to the narrower opportunities that are owned, then human development is the opposite. The concept of human development is to expand human choices (enlarging choices), especially to meet basic needs such as health, education, and purchasing power. With this inverse relationship, an area with good quality human development ideally has a low percentage of poor people.

Rapid population growth in a country will lead to chronic poverty (Todaro & Smith, 2011). A universal tendency is that a country's population would increase very rapidly according to a geometric progression. Meanwhile, due to increasing yields that are decreasing from a fixed number of factors of production, namely land, the food supply will only increase arithmetically. Since growth in food supply cannot keep pace with or keep pace with population growth, per capita income (in an agrarian society, per capita income is defined as per capita food production) tends to continue to decline to such a low level that the entire population must survive conditions slightly above the subsistence level.

According to Samuelson and Nordhaus (as cited in Jessica et al., 2017), the causes and occurrence of poor people in low-income countries are due to two main things, namely low levels of health and nutrition and slow improvement in the quality of education. Therefore, the government's first effort is to eradicate disease, improve health and nutrition, improve the quality of education, eradicate illiteracy, and improve the skills of the population. The five things are efforts to improve the quality of human resources. If these things can be done quickly, people will be able to use their capital more effectively, absorb new technology, and learn from their mistakes. If the provision of adequate public facilities supports this, it will soon be able to alleviate poverty. Therefore, the level of education (including skills), low levels of health, and limited public facilities are the causes of poverty.

In overcoming educational problems, the Palembang City Government made an innovation, namely the Palembang Filial School/Formal Education Service is called Selfi, which the Palembang City Education Office developed. This Filial School Program is to accommodate street children and children who have dropped out due to material limitations to be able to return to school and are also intended for Child Prisoners in Children's Special Guidance Institute Class I so that in 2019, the Filial School is officially opened for all those in need (street children and children who have problems with the law in the city of Palembang).

Filial School students will receive school supplies, such as school bags, stationery (student books and stationery), school shoes, and school uniforms. With this program, it is hoped that the number of street children and school dropouts in the city of Palembang can be reduced, and the city of Palembang can become a city of education in Indonesia. With the Selfi Public Service Innovation, the Palembang City Government received an award from the Indonesian Vice President Jusuf Kalla as the Top 45 best innovations in the 2019 Public Service Innovation Competition. Another innovation is the No Stop School Service Program is called Poltabes from the Education Office of Palembang, which is in the top 45. This Poltabes concept is a development of the Selfi Program (Filial school) which educates children who drop out of school, in this poltabes program in addition to the anjal and children who If you have problems with the law, you can finish school in general, but you are also given skills and abilities, including learning automotive practice, sewing practice, computer practice, this program is expected to prevent those who have graduated from school will return to the streets. This innovation reduced the Palembang City dropout rate from 1,278 cases to 491 cases, thus supporting the increase in the Palembang City Human Development Index from 77.89 to 78.44 (Center for Education and Culture Data and Statistics/PDSPK, 2019). The Innovation of the No-School Service Program (Poltabes) from the Education Office of the city of Palembang received an award from the Central Government through the KemenPan RB as the best innovation in the Top 45. Visit of the deputy of the Ministry of State Apparatus Empowerment and Reform to see firsthand the activities in this Poltabes innovation program.

#### 4. Conclusion

Poverty and education determine the level of public health in the city of Palembang. Poverty has a negative correlation with public health, which means that an increase in poverty can reduce the achievement of public health figures, especially the life expectancy of an individual. Communities at risk of poverty are the most likely to have life expectancies indirectly affected by health and nutrition. In contrast, this indirect effect occurs through lower-income, affecting health and life expectancy. The increasing level of community productivity can encourage economic growth, which will ultimately reduce the poverty rate, meaning that the higher the life expectancy, the poverty rate will decrease. While the direction of education is negative, it can be concluded that education has no significant effect on public health. A high average length of schooling can change people's mindsets for the better than before. The length of the school will increase people's knowledge to carry out clean and healthy living behaviors. In order to approach a better public health status in Palembang City, poverty is reduced by reducing unemployment and increasing education.

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