



## Analysis of the Effect of Physical Capital Investment and Human Capital Investment (Education and Health) on Poverty in South Sulawesi Province

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**ABSTRACT** - Indonesia has a record of decreasing poverty rates which are quite impressive in the last two decades. This also happened in South Sulawesi Province which was one of the best contributors to economic growth in Indonesia. The downward trend in poverty level in South Sulawesi province fluctuates from two digit numbers to one digit numbers. Therefore, This study aims to determine the relationship and influence of physical capital investment and human capital investment (Education and Health) on poverty levels through economic growth in the province of South Sulawesi in the period 2012 to 2016.

This study uses secondary data from the publication of the Central Statistics Agency of Indonesia regency South Sulawesi province on 24 districts / cities in the period 2012 to 2016 which are then compiled in the form of panel data and analyzed by multiple regression methods using the Amos SPSS application

The analysis results with a standard error of 5%, indicating that there is a significant and negative relationship between physical capital investment and poverty level. The Human Capital Investment in the Education variable shows that there is a significant and negative relationship to poverty while the health variable does not significantly influence the poverty level.

**KEYWORDS:** Investment in Physical Capital, Investment in Human Capital (Education and Health) and Poverty Head Count Index

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### I. INTRODUCTION

Poverty is still a complex problem for developing countries such as Indonesia and underdeveloped countries. Poverty in economic point of view is a condition where a person's purchasing power or ability is very low, so that he is unable to fulfill his basic needs (primary), such as: clothing, food, and shelter. Along with the increasingly complex causes, indicators and other problems that surround it, poverty is not only seen from the economic dimension, but extends to the dimensions of social, food, health, education, employment and even politics. Attention to poverty has become a global issue that is expressly revealed in the Millennium Development Goals (MDGs). The MDGs set the main target is the elimination of extreme poverty and hunger in 2015.

The Central Statistics Agency (BPS) uses the poverty line method to determine the boundaries of the poor. The Poverty Line (GK) is the sum of the Food Poverty Line (QCC) and the Non-Food Poverty Line (GKNM). Residents who have an average per capita expenditure per month under the Poverty Line are categorized as poor. Food Poverty Line (GKM) is the expenditure value for minimum food requirements which is equal to 2100 kilocalories per capita per day. Commodity packages for basic food needs are represented by 52 types of commodities (grains, tubers, fish, meat, eggs and milk, vegetables, nuts, fruits, oils and fats, etc.). The Non-Food Poverty Line (GKNM) is the minimum requirement for housing, clothing, education and health. Commodity packages for non-food basic needs are represented by 51 types of commodities in urban areas and 47 types of commodities in rural areas. The selection of non-food items and services has developed and

improved from year to year according to changes in population consumption patterns. To analyze the level of poverty intensity, the Central Statistics Agency uses three poverty indicators, namely :

1. Head Count Index, that is the percentage of the population below the poverty line.
2. Poverty Gap Index (Depth Depth Index), Is a measure of the average expenditure gap of each poor person to the poverty line.
3. Poverty Severity Index (Poverty Severity Index), Provide an overview of information about the distribution of expenditure among the poor.

Kuncoro (2006) states that the simplest way to measure poverty is the size of the Head Count Index. Meanwhile, the World Bank measures absolute poverty as a standard of living with income below USD \$ 1 / day, and medium poverty for income below \$ 2 per day. The World Bank makes absolute poverty lines of US \$ 1 and US \$ 2 PPP (purchasing power parity) per day (not official US \$ exchange rates) with the aim of comparing poverty rates between countries / regions and their development over time to assess progress achieved in fighting poverty at the global / international level.

The complex problem of poverty requires integrated solution in policies and strategies, for example through programs to expand productive employment opportunities, human empowerment and ease of accessing existing socio-economic opportunities. Because of various government limitations, poverty alleviation programs or policies that are oriented to the problem of poverty require a scale of priority. However, policies on poverty alleviation should not only focused on the poor which have been carried out by the government such as direct cash assistance and family hope programs. Although these programs can alleviate the burden of the poor and provide positive results in the report on poverty figures, this only lasts a limited time as long as the policy is implemented and leaves the impact of dependence on the poor. Programs and policies regarding poverty should indeed not only depend on micro policies, but must run together with macro solution in economic policies through economic growth that is pro-poor (Pro poor growth).

Simon Kuznets (1955) in Todaro (2006) said that in the early stages of economic growth, income distribution tended to deteriorate, but at a later stage, income distribution would improve. In essence, economic development is a series of efforts and policies that aim to improve people's living standards through creating opportunities and employment, equalizing the income distribution of the community, increasing regional economic relations through shifting economic activities from the primary sector to the secondary and tertiary sectors. In other words, the direction of economic development is how to make people's income can rise which is accompanied by the best level of equity through economic growth.

R.F Harrod (1939) dan Evsey Domar (1947) theory analyzes the requirements needed by a country so that its economy can grow and develop steadily (Steady Growth) by giving an important role in the formation of investment in the process of economic growth. Investment is considered an important factor because it acts as a factor that can create income and can increase the production capacity of the economy by increasing capital stock. Investment is considered able to influence the demand side and supply side.

Nurkse (1953), an economist who pioneered a study of the problem of capital formation in developing countries with the theory of the vicious circle of poverty, states that there are two traps in the circle of poverty, namely from the supply side where the low level of community income due to low levels of productivity causes the ability of the community to be low. The ability to save low causes the level of capital formation to be low, the low level of capital formation (investment) causes a lack of capital, and thus the level of productivity is also low and so on. From the demand side, in poor countries the ability to invest is very low, this is because the market area for various types of goods is limited due to very low people's income. The low income of the community is due to the low level of productivity, as a manifestation of a limited level of capital formation in the past. Limited capital formation is caused by a lack of incentives to invest capital and so on. He emphasizes that low productivity is due to the low availability of capital that can be invested.

Mishkin (2012), economic development is aimed to improving the level and quality of life of the community by spurring an increase in per capita productivity. Economic growth is a reflection of capital formation through investment and productivity activities. Investment is one of the main factors that will spur economic growth in a region. In the context of Aggregate Demand, the physical investment activity (Fixed Asset Investment) is reflected in the formation of gross fixed capital (PMTB). The investment referred to here is not only in physical and financial investment but also investment in human capital.

Every nation must increase investment in human capital through education and health sector to achieve these goals (Meier, et al, 2005). Investment in human capital will increase the average level of knowledge and skills possessed by the community, and it will be easier for individuals who enter the working age to understand, apply technological progress and get results from technological advances that will ultimately increase the productivity and economic standards of society.

As a developing country, Indonesia is still unable to solve these poverty problems as a whole, but Indonesia has a good record of decreasing poverty rates which are quite impressive in the last two decades. South Sulawesi province which was one of the best contributors to economic growth of Indonesia has a good trend in poverty which is fluctuates from two digit numbers to one digit numbers in last 5 years. Since 2008, South Sulawesi has been declared a province with an accelerating rate of economic growth that increases every year with a fairly good percentage increase.

**Table1.1.** Economic Growth Indonesia Vs South Sulawesi Province

Years	Economic Growth	
	Indonesia (%)	South Sulawesi (%)
2012	6.03	8.39
2013	5.56	7.65
2014	5.02	7.54
2015	4.88	7.17
2016	5.02	7.19

Source: Central Statistics Agency (BPS), Data Processed

In 2012 to 2016, Indonesia's highest GDP growth rate occurred in 2012 with a figure of 6.03%, the lowest trend of Indonesia's GDP growth rate occurred in 2015 with a growth rate of only 4.88%, in 2016 economic growth improved and moved up to number 5.02%. Furthermore, in South Sulawesi Province the highest GRDP growth rate occurred in 2012 with 8.2%, in 2013, GDP growth fell to 7.65% then in 2014 to 2016 GDP growth was relatively stable at 7.54%, 7.17% and 7.19%. This data show us that South Sulawesi province economic growth even exceeds the national average economic growth rate.

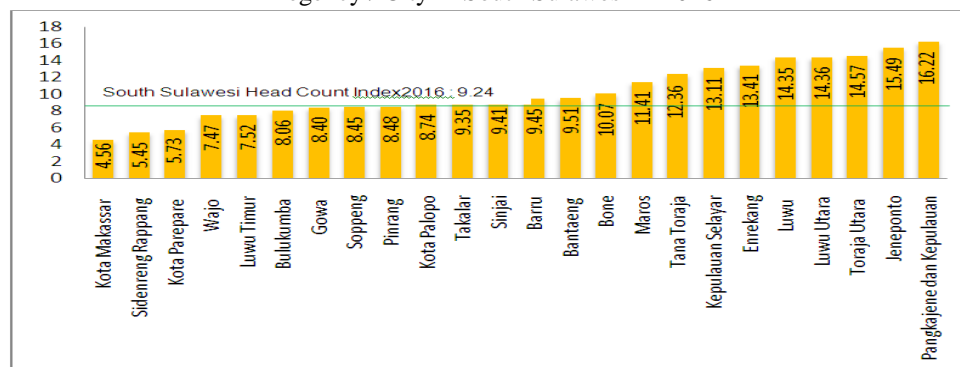
**Table1.2.** Poverty Indonesia Vs Poverty South Sulawesi Province

Tahun	Poverty	
	Indonesia (%)	Sulawesi Selatan (%)
2012	11.66	9.82
2013	11.47	10.32
2014	10.96	9.54
2015	11.12	9.39
2016	10.86	9.24

Source: Central Statistics Agency (BPS), Data Processed

The percentage of poverty in the province of South Sulawesi is also lower than the national poverty rate. In the period of 2012 to 2016 the national poverty rate moved fluctuate. In 2012 with a figure of 11.66% then moving down and the lowest in 2016 with a figure of 10.86% and still holding a double-digit rating. Meanwhile the highest percentage of poverty in South Sulawesi Province occurred in 2013 at 10.32% and moved steadily and continued to decrease to 9.24% in 2016.

**Figure1.1.** Percentage of Poor Population (Head Count Index) according to Regency / City in South Sulawesi in 2016



Source: Central Statistics Agency (BPS), Data Processed

Figure 1.1 showing that several districts in the province of South Sulawesi in 2016 still had a percentage of poverty above the poverty percentage of the province of South Sulawesi. The relatively large number of poor people in several districts / cities in South Sulawesi can confirm that poverty reduction policies and programs that have been implemented massively in recent years do not seem to be effective enough to improve the living standards of the poor.

Based on the data above and basic theory of productivity (Economic growth) and poverty, we suspect that there is a link between economic growth and poverty in South Sulawesi province. There are a number of factors that drive economic growth, but we want to focus on investment factors, especially physical investment and human resources to encourage economic growth and how they affect the reduction of poverty in the province of South Sulawesi.

## **II. DATA AND METHODOLOGY**

### **2.1 Data**

The type of data to be analyzed in this research is secondary data in the form of panel data (pooled data) with the characteristics of cross section and time series simultaneously. Panel data is a combination of cross-sectional data (cross section) with time series data (time series).

Data in time series is then processed and formed into panel data which is then processed by the method that will be used in this study. The purpose of the use of regency / city gross domestic product data, both from the expenditure sector and the production / business sector released by the BPS, is due to the wider scope of data because it accommodates all investment activities from government expenditure, private sector expenditures and public consumption.

BPS obtained data from the realization of APBN / APBD; Ministry Of Health; National Socioeconomic Survey (Susenas); Various special survey conducted DNP and DNPeng BPS RI; Sub Consumer Price Statistics.

### **2.2 Location Of The Study**

This research was conducted in the province of South Sulawesi with the number of 24 districts / cities being the benchmark of the research location. This research was conducted in South Sulawesi Province with the number of 24 districts / cities being the benchmark of the research location. The reason for determining the location of the study was because the number of poor people was still relatively large in several districts / cities in South Sulawesi, it is confirm that poverty reduction policies and programs have been implemented on a large scale in recent years it seems not effective enough to improve the living standards of the poor people.

### **2.3 Population And Sample**

In this study, the population is all 24 regency / city in South Sulawesi Province. Secondary data collection used in this study was carried out through data collection from sources from the Central Statistics Agency. The data in question are economic growth data, poverty data (Head Count Index), physical investment data (Gross Fixed Capital Formation), investment data on human resources in the education sector and investment data on health sector human resources published by (BPS) Central Bureau of Statistics on Gross Regional Domestic Products according to expenditure and business fields in 24 Regencies / Cities in South Sulawesi Province.

The data period used in this study is year 2012-2016, this time period was used because considering that between these years there was a best pace of economic growth in South Sulawesi province above the average national economic growth and poverty rates down to one digit number so it is expected to be able to make this research more accurate.

### **2.3 Method Of Analysis**

We use simultaneous equation model with multiple linear regression to analyze the relationship between each variable. To find out the positive and negative relationships between each variable, a scatter diagram is used. Scatter diagrams can test the strength of the relationship between 2 (two) variables and assess the direction of the relationship between the two variables, whether the relationship is positive or negative or there is no relationship at all.

The model used can be formulated as follows:

Economic Growth Model

$$Y1 = f (X1, X2, X3) \dots\dots\dots(2.1)$$

Poverty Head Count Index Model

$$Y2 = f (X1, X2, X3, Y1) \dots\dots\dots(2.2)$$

Based on the functional relationship above, it is then described in the following substructure equations:

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$$Y_1 = \beta_1 X_1 + \beta_2 X_2 + \beta_3 X_3 + \mu_t \dots \dots \dots (2.3)$$

$$Y_2 = \beta_1 X_1 + \beta_2 X_2 + \beta_3 X_3 + \beta_4 Y_1 + \mu_t \dots \dots \dots (2.4)$$

Information :

- $Y_1$  = Economic Grow (%)
- $Y_2$  = Poverty Head Count Index (%)
- $X_1$  = Growth in Physical Investment (%)
- $X_2$  = Growth in Education Sector HR Investment (%)
- $X_3$  = Growth of Health Sector HR Investment (%)
- $\beta_1, \beta_2 \dots \beta_4$  = Regression Coefficient
- $\mu_t$  = Error term

### 2.4 Research Variable

The operational definitions of each variable are as follows:

#### 1. Poverty Head Count Index

Poverty Head Count Index data, which explains the percentage of the poor population that is below the poverty line set by the Government Statistical Center Agency (BPS) in 24 districts / cities in the province of South Sulawesi. Head Count Index, can be describe as formula as follow :

$$P_0 = \frac{1}{n} \sum_{i=1}^q \left[ \frac{z - y_i}{z} \right]^0$$

Information :

- $P_0$  = Head Count Index
- $z$  = Poverty Line
- $y_i$  = Average monthly per capita expenditure of the population below the poverty line ( $i=1,2,3,\dots,q$ ),  $y_i < z$
- $q$  = Number of people below the poverty line
- $n$  = Total population

#### 2. Economic Growth

Economic growth shows the growth of production of goods and services in an area of the economy within a certain time interval. This data is used to measure economic progress as a result of development, as a basis for making projections or estimates of state revenues for national or sectoral and regional development planning and as a basis for making business forecasts, especially sales equations.

$$\text{Economic Growth} = \frac{\Delta GDP}{GDP_t} \times 100\%$$

Information :

- $G$  = Economic growth
- $GDP$  = Gross Domestic Product
- $\Delta GNP$  = Change in GDP (GDP this year – GDP last year)
- $GNP_t$  = Gross Domestic Product this year

#### 3. Physical Investment

The physical investment data in this study refers to data on Gross Fixed Capital Formation (PMTB) in 24 District / City Gross Domestic Product according to expenditure year 2012 -2016 released by Government Statistical Center Agency(BPS). Physical investment data in this study are expenditures for capital goods that have a service life of more than one year and are not consumer goods. This physical investment includes residential and non-residential buildings, other buildings such as roads and airports, as well as machinery and equipment except military equipment. Capital goods for military purposes are not included in these details but are classified as government consumption.

Gross Fixed Capital Formation (PMTB) is defined as the addition and reduction of capital goods that exist in the production unit in a certain period of time. The addition of capital goods includes the procurement,

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manufacture, purchase, rental purchase (financialleasing) new capital goods from within the country, as well as new capital goods and used capital goods from abroad (including major repairs, transfers and barter), and the growth of cultivated biological resources (CBR). While the reduction in capital goods includessales, transfers or barter, and financial leasing of used capital goods to other parties. In the case of reduction of capital goods caused by natural disasters not recorded as a reduction.Capital goods have a service life of more than one year, and experienceshrinkage throughout its useful life. The term "gross" indicates that it contains an element of shrinkage. Depreciation or consumption of capital goods (Consumption of Fixed Capital) describes a decrease in the value of capital goods because it is used in the production process normally during a certain period. Capital (Consumption of Fixed Capital) describes a decrease in the value of goodscapital because it is used in the production process normally during the periodcertain.The PMTB component is estimated using the direct methodor indirect methods depending on the availability of data in eacharea.

#### 4. Education Investment

Educational investment in this study uses data released by the Central Statistics Agency (BPS) on the 24 Regency / City Gross Domestic Product based on Business Fields in 2012-2016. This data refers to the gross added value of government education services with current prices using the expenditure approach, and the gross added value of private education services using a production approach.

This category includes educational activitiesat various levels and for various jobs,either orally or in writing as well as the variousmeans of communication. This categoryalso includes public and private educationalso includes teaching, especially regardingsportsactivities, entertainment and educationalsupport. Education can be provided in theroom, through radio and television broadcasting,internet and correspondence. Theeducation level of activities classified as primaryeducation, secondary education,higher education and other education, supportservices also include education andearly childhood education.Grossvalue added services for Government Educationat constant prices 2010 using deflationapproach, while the Private Education Services using revaluation approach.

Data obtained from the realization of APBN / APBD, The Ministry of Education and The Cultural, Ministry Of Religion, Variouspecial survey conducted DNP and DNPeng BPS RI Sub Consumer Price Statistics.

#### 5. Health Investment

Health investment in this study uses data released by the Central Statistics Agency (BPS) on the 24 Regency / City Gross Domestic Product based on Business Fields in 2012-2016. This is includes providinghealth services and social activities are quite broad in scope, starting from health care provided by skilled professionals in hospitals and other health facilities to home care activitiesthat involve levels of health care activities to social activities that do not involve force health professionals. Provision of health services and social activities include, Hospital Services, Clinical services, Other Hospital Services Physician practices, HealthCare Services, Special Transport Services Paramedic, Traditional Health Care Services, Supporting Service Transporting the Sick(Medical Evacuation) Animal Health Service and Social Work Services.

The calculation method for government services at current prices using the expenditure approach, while the private sector production approach. Gross value added ofhealth services and social activities of the government on the basis of constant prices 2010 using deflation approach, while health services and social activities of private use revaluation approach.

### III. RESULTS AND DISCUSSIONS

#### 3.1 Results

**Table 3.1 Direct Effect Parameter Estimation Results  
Between Variables Based on Simultaneous Equation Model**

Functional Relations			Estimasi Parameter	CR	P
Dependent variable	Independent variable		Nilai		
Economic Growth (Y1)	1.	Physical investment (X1)	.097**	-.685	.043**
	2.	Education Investment (X2)	.117**	-1.394	.040**
	3.	Health Investment (X3)	.082	1.456	.145ns
Poverty (Y2)	1.	Physical investment (X1)	-.729***	-1.664	.004***
	2.	Education Investment (X2)	-.320***	.637	.008***
	3.	Health Investment (X3)	.129	1.451	.147ns
$R^2Y_1 = 0.152, R^2Y_2 = 0.358$					

**Table 3.2 Parameter Estimation Results Direct and Indirect Effects Between Variables Based on Simultaneous Equation Model**

Inter-Variable Influence		Estimated Direct Effect	Estimated Indirect Effects
1.	Physical Investment (X1) on economic growth (Y1)	.097**	
2.	Physical investment (X1) on poverty (Y2)	-.729***	
3.	Physical investment (X1) on poverty (Y2) through economic growth (Y1)		-.049***
1.	Education Investment (X2) on economic growth (Y1)	.117**	
2.	Education Investment (X2) on poverty (Y2)	-.320***	
3.	Education Investment (X2) on poverty (Y2) through economic growth (Y1)		-.059***
1.	Health Investment (X3) on economic growth (Y1)	.082ns	
2.	Health Investment (X3) on poverty (Y2)	.129ns	
3.	Health Investment (X3) on poverty (Y2) through economic growth (Y1)		-.041**
1.	Economic growth (Y1) on Poverty (Y2)	-.502**	

Source : IBM SPSS Amos, \*\* Significance at level 5%, \*\*\* Significance at level 1%, ns (Notsignificant)

### 3.2 DISCUSSION

The results of this study found that physical investment and education investment significantly influence the percentage of poverty both directly and indirectly through economic growth. Meanwhile health investments have no significant effect on poverty. Each variable discussion can be describe as follow :

#### 1. Effect of physical investment on poverty

The relationship of physical investment to economic growth and poverty was found to be significant. Direct effect of Physical investment has a positive influence on economic growth and negative effects on poverty. Furthermore, indirect effect of physical investment on poverty trough economic growth also found negative.

The results of this study support Keynes's economic growth theory which states that investment is a factor of economic growth and also support the theory of the vicious cycle of poverty by Ragnar Nurkse which states that one of the causes of poverty is a lack of capital accumulation. Although the theory emphasizes the formation of financial capital (Savings), this theoretical model can also be interpreted as capital in general, such as physical capital, financial capital, or natural resource capital.

Gross fixed capital formation is physical investment or expenditure of government and private companies to buy capital goods and production equipment to increase the production capacity of goods and services available in the economy, so this activity is also called investment (Sukirno, 2010).

This is happened in the first and second generation growth processes in NIE countries (South Korea, Singapore, Malaysia and Thailand). "Miracle Growth" in these countries in the 1970s to the early 1990s has produced extensive and different literature that aims to explain the reasons for the success of development for the long term. On the one hand, proponents of this view emphasize the importance of physical capital accumulation and the accumulation of human capital in the Asian growth process. Thus, the main engine of "Magic growth" in NIEs is a very high level of investment (Nguyen, 2009).

Previous research conducted by Nurjihadi 2013, describe that tobacco farmers in rural Lombok have experienced a vicious cycle of poverty with new patterns. The low level of farmer's capital encourages farmers to partner with tobacco companies, this partnership then creates farmers 'dependence on tobacco commodities and partner companies, the dependence makes the bargaining position of farmers weak in the transaction process which results in low farmers' income, low income makes farmers trapped in debt traps and unable to accumulate capital, thus farmers return to have very low capital and live in poor conditions.

Balisacan and Pernia 2002 in the Philippines also found that the construction of road infrastructure added with additional facilities in the form of schools had a direct and indirect effect through strong economic growth in the welfare of the poor, with an estimated elasticity of 0.05. They found that each addition of 1 percent of road access coupled with the construction of a school building would have an indirect influence on increasing the income of the poor by 0.32 percent through Economic Growth and would have a direct influence of 0.11 percent on increasing income of the poor.

Capital expenditures made by the provincial government, district / city and central government through programs to improve road infrastructure across districts and provinces, infrastructure for the procurement of railway lines, and agricultural infrastructure in supporting increased agricultural production make a good investment climate and encourage private interest in and abroad to open their businesses in the province of South Sulawesi. This can be seen from the interest of several countries to invest in several growing business

sectors, the construction of power plants in several regions, the construction of factories that manage agricultural products and the construction of several private ports in several districts which encourage increased physical investment in South Sulawesi Province. This situation encourages the opening of new jobs, reduces unemployment, increases people's income so that it has a positive and significant impact on economic growth and has a negative effect on poverty rates in South Sulawesi Province.

## **2. Effect of Educational Investment on Poverty**

Educational investment for economic growth and poverty is found to be significantly related. Direct effect of educational investment has a positive influence on economic growth. Meanwhile, education investment has a negative effect on poverty both directly and indirectly through economic growth.

Theoretically the development of human resources through educational investment can encourage an increase in the quality of labor that has an important role in encouraging economic growth. T. Schultz 1960, states that investment in human resources is as important as physical investment, the educational process is considered as a process of forming human capital that will increase the value of labor productivity and increase productivity / income. (Perkins 2001). Long Education has a significant impact on income, which means that the higher accumulated costs incurred in front of education costs will have a better welfare impact in the future.

Previous research conducted by Islam R et al 2016 found the positive relation of education and human capital on Malaysian economic growth. Based on the results of the correlation test conducted, the results of their analysis show that there is a positive relationship between education variables and economic growth in Malaysia with a value of  $r = 0.710$   $P < 0.01$

The results of this study illustrate that investment in education by both the community through public and private university and local government through programs to improve the quality of education services as a priority for regional development has a significant positive effect on economic growth and poverty alleviation. Policy strategies adopted by the regional government in South Sulawesi Province such as the nine-year compulsory education program, programs to improve secondary education access, educational technology, information and communication development programs, and the development of a library reading and guidance culture, scholarship assistance for university students through collaboration with the management of private and public tertiary institutions as well as education and job training assistance for high school graduate students, it is quite effective in assisting the community in increasing the level of education, skills and increasing enrollment rates and school years which in turn have an impact on increasing knowledge and productivity in society

## **3. Effect of Health Investment on Poverty**

In this study, the health investment variable regression results are not in accordance with the research hypothesis. The value of the standardized coefficient of health investment on economic growth is not significant, which means that it does not have an indirect effect on poverty.

The results of health investments can be seen from increasingly quality public health as indicated by increasing in life expectancy. High life expectancy shows a good level of public health which will increase the productivity of the community, so that the rate of economic growth is ultimately expected to improve welfare by reducing poverty. However, the results of this study contrast with the initial hypothesis so that it can be explained that the level of good health cannot be a factor that influences the poverty rate in South Sulawesi. The quality of good health in South Sulawesi Province has not been able to increase community productivity because of the culture of the people who still depend on formal professions that offer fixed income. The tendency of the community to create their own business fields is still in a fairly low level. This can be a homework that must be addressed by the South Sulawesi Provincial Government in the future.

## **IV. CONCLUSIONS AND RECOMMENDATIONS**

### **4.1 Conclusions**

The results of this study indicate that physical investment variables and education investment variables have a significant relationship to reducing poverty both directly and indirectly through economic growth

Based on the results of this study, it can be concluded that the role of physical investment and investment in education in increasing economic growth and reducing poverty are quite significant in South Sulawesi Province. The role of the government in making economic policies has encouraged investors to invest their capital. Government policies in the education sector have increased public awareness of the importance of education in improving their income and life.

### **4.2 Recommendations**

The results of this study can be used as a model for development policies that can be applied in other regions, especially in districts with high levels of poverty. Another thing is that it requires cooperation and



synchronization of policies between the provincial government and the district government so that the results obtained can be maximized and benefits can be felt in a short time

In this study the author still has weaknesses and shortcomings including the limited variables and the period of the year that we studied so that the results are not satisfactory. The results of this study are expected to be a reference for further research in the same field. Therefore to obtain better study results the authors suggest further researchers to add more independent variables and add a longer period of research so that they will find more satisfying results.

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