

# Path Analysis: Relationship Between Regional Government Capital Expenditures, Human Development Index And Labor Absorption On Poverty And Economic Growth In Palopo City

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## Abstract

This research aims to determine the relationship between regional government capital expenditure, human development index, labor absorption on poverty and economic growth in Palopo City. This research uses secondary data obtained from the Palopo City Central Statistics Agency. There are regional government capital expenditures, human development index and labor absorption as exogenous variables, while poverty levels and economic growth are endogenous variables. This research uses panel data which combines time series and cross section data. The tool used is quantitative analysis using path analysis. The research results show that all hypotheses are accepted. Hypothesis 1 states that regional government capital expenditure has a significant positive effect on economic growth. Hypothesis 2 states that the Human Development Index has a positive and significant effect on economic growth. Hypothesis 3 states that labor absorption has a positive and significant effect on economic growth. Hypothesis 4 states that economic growth has no significant effect on poverty. Hypothesis 5 shows that the Human Development Index is significantly negative on poverty.

*Keywords: Economic growth; Poverty; Path analysis*

## 1. Introduction

According to Kuznets in Todaro defines economic growth as an increase in the long-term capacity of the country concerned to provide various economic goods to its population [1]. Todaro [1] stated that there are three main components in the economic growth of every country. First, capital accumulation, which includes all forms or types of new investment invested in land, physical equipment and human capital or human resources. Second, population growth will further increase the number of the workforce. Third, technological progress, namely in the form of new ways or improvements to old ways of handling a job.

Economic growth is an indicator to see economic performance, both at the national and regional (regional) levels. Basically, economic growth is an increase in aggregate output (all goods and services produced by economic activities) or Gross Domestic Product (GDP). GDP itself is the total value of all final output produced by an economy, both by local residents and foreign residents who live in the country concerned. Thus, the general measure that is often used to see the rate of economic growth is the percentage change in GDP on a national scale or the percentage change in GDP on a provincial or district/city scale.

Neo Classical economic growth theory developed since the 1950s. Todaro [1] Solow's Neo Classical growth model is a development of Harrod Domar's formulation by adding a second factor, namely labor, and introducing a third independent variable, namely technology, into the growth equation. In its more formal form, the Solow neo-classical growth model uses

the standard aggregate production function, namely:  $Y = A e^{\mu t} K^{\alpha} L^{1-\alpha}$ . Y is gross domestic product, K is the stock of physical capital and human capital, L is unskilled labor, A is a constant that reflects the level of basic technology, while  $e^{\mu}$  represents the constant level of technological progress. The symbol  $\alpha$  represents the elasticity of output towards capital (or the increase in GDP that comes from a 1 percent increase in physical capital or human capital). Apart from that, endogenous growth theory analyzes growth that is endogenous. Economic growth is a result of the economic system. This theory assumes that economic growth is determined by the production system, rather than coming from outside the system. Technological progress is endogenous. Growth is part of the decision of economic actors to invest in knowledge. The initial model of endogenous growth by Romer (1983, 1986) stated that long-run growth is generally determined by the accumulation of knowledge. Even though the addition of new knowledge shows diminishing returns for a company, the creation of knowledge in a company is assumed to have a positive impact externally on the production technology of other companies.

According to the Central Statistics Agency, poverty is the inability of the population to meet the minimum standards of basic needs which include food and non-food needs. The purpose of this definition is to compare the population's consumption level with the poverty line (GK) or the amounts of rupiah a person consumes per month.

BPS [2] calculates the poverty rate using two approaches, namely, the first approach is the approach that is often used and defines poverty as the inability to meet basic needs, while the Head Account Index is a measure that uses absolute poverty. Meanwhile, the number of poor people is the number of people below the poverty line, which is the rupiah value of the minimum food and non-food needs, which are not only limited to clothing and shelter but also include education and health. In terms of minimum food requirements, BPS does not equate basic needs with the amount of rice but uses the indicator recommended by Widyakarya Food and Nutrition in 1998, namely 2,100 calories per person per day. BPS first reported the calculation of the number and percentage of poor people in 1984. At that time, the calculation of the number and percentage of poor people covered the period 1976-1981 using the Susenas (National Socio-Economic Survey) consumption module. Since 1981, every 3 years, using the Susenas consumption module data, BPS has routinely released data on the number and percentage of poor people only presented at the national level, separated by urban and rural areas. Furthermore, since 1993, information regarding the number and percentage of poor people has been presented for all provinces.

According to Keynes the level of activity in the economy is determined by aggregate expenditure. If government spending increases, aggregate demand (AD) will increase. Apart from that, the role of government spending (G) in developing countries is very significant considering that the private sector's ability to drive economic growth is still very limited, therefore the role of government is very important. An increase in aggregate demand (AD) means economic growth occurs, because economic growth is measured from GDP, an increase in growth means an increase in income (Mankiw, 2006).

Mankiw (2006) suggests that one component of GDP is government expenditure/government spending includes spending on goods and services by regional, state and central (federal) governments. Government spending includes wages for government workers and spending on public interests. However, government workers' wages are called transfer payments because they are not spent on the goods and services produced. Transfer income affects household income, but does not reflect the economy's production. From a macroeconomic perspective, transfer payments act like a negative tax. Because GDP is intended to measure income from the production of goods and services as well as expenditure on the production of goods and services, transfer payments are not counted as part of government spending.

Types of government spending in both state and state income and expenditure budgets regional (province/district/city), expenditure is divided into:

- a. Operational spending. Details of operational expenditure include, among other things, employee expenditure, expenditure on goods and services, maintenance, official travel, loans, subsidies, grants and other operational expenditure.
- b. Capital expenditure. Capital expenditures are used to purchase/establish fixed assets such as buildings, roads (infrastructure) and other fixed assets.
- c. Unexpected shopping. This is unexpected expenditure that was not previously budgeted for, such as disaster management.

According to Lewis, the economy is divided into two sectors, namely: (a) the traditional sector (rural subsistence) which is characterized by very low or even zero labor productivity; (b) the modern sector (urban industry) where labor from the subsistence sector moves slowly. The process of labor movement and growth in the level of work in urban areas has led to output growth in the modern sector. With investments made in the modern sector where the average income is considered constant, it will attract workers from the traditional agricultural sector so that additional workers will increase the products produced.

According to Todaro (2003) population growth and labor force growth are consistent. Traditionally considered a positive factor that spurs economic growth. A large workforce means an increase in the number of productive workers, while greater population growth means a larger domestic size. However, it is still questionable whether this has a positive or negative impact on economic growth. Everything depends entirely on the ability of the economic system in question to absorb and productively utilize the additional workforce. This capability is influenced by labor and capital accumulation as well as the availability of input and supporting factors, such as managerial and administrative skills.

According to the Central Statistics Agency (BPS), the working age population is defined as the population aged 15 years and over, and is differentiated into the Labor Force and non-Labor Force. Population growth every year will influence the growth of the labor force. To see its role in economic growth, a productive workforce is needed that is able to produce goods and services.

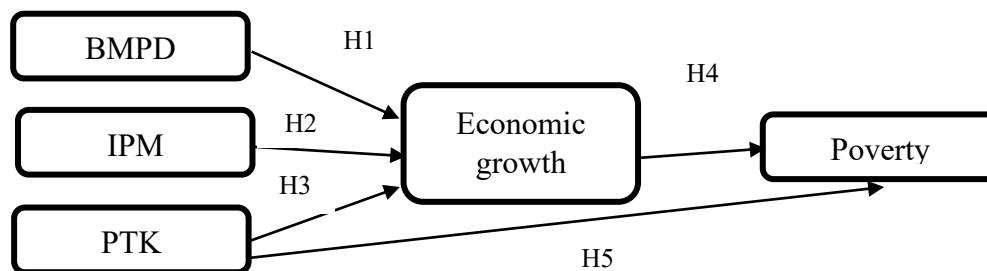
According to the United Nations Development Program (UNDP), in the Human Development Index (HDI) there are three composite indicators used to measure a country's

average achievement in human development, namely: length of life, which is measured by life expectancy at birth; education which is measured based on the average number of years of schooling and the literacy rate of the population aged 15 years and over; Living standards are measured by per capita expenditure adjusted to purchasing power parity. This index value ranges from 0-100.

According to Mankiw (2003) human capital is the knowledge and abilities obtained by workers through education ranging from programs for children to on-the-job training for adult workers. As with physical capital, human capital increases the ability to produce goods and services. To increase the level of human capital requires investment in the form of teachers, libraries and study time.

## 2. Methodology

This research uses secondary data in the form of a time series from 2013 to with 2022 and cross section data consisting of 9 sub-districts in Palopo City so that it is pooled data, namely a combination of time series data (2013-2022: 10 years) with cross section data from 9 sub-districts. Data collection was carried out using literature studies in the form of statistical references, periodicals, books and documents.



Information:

BMPD : Regional Government Capital Expenditures  
 IPM : Human Development Index  
 PTK : Employment

$$GR = \frac{(PDRB_t - PDRB_{t-1})}{PDRB_{t-1}}$$

Information:

GR : Economic growth  
 PDRB<sub>t</sub> : PDRB in year t  
 PDRB<sub>t-1</sub> : PDRB in the previous year

To fulfill the objectives of this research and test the hypotheses that have been established, path analysis was carried out. Ghozali (2005) path analysis is a development of a regression model that is used to test the suitability (fit) of the correlation matrix of two or more models compared by researchers. Models are usually depicted with circles and arrows showing causal relationships. Path analysis is a causal model analysis of independent (exogenous) variables, intermediate (endogenous) variables, and dependent variables as well as all measured variables.

In this research, the economic growth of Palopo City is (Y); the stock of physical capital and human capital is seen through (1) realization of regional government capital expenditure (BMPD), (2) Human Development Index (HDI) and (3) absorbed labor seen by the number of employed labor force (L) while poverty is represented with P, so that we get the equation:

$$Y_{it} = \alpha_0 + \alpha_1 BM_{it} + \alpha_2 IPM_{it} + \alpha_3 L_{it} + \varepsilon_{it}$$

$$P_{it} = \beta_0 + \beta_1 Y_{it} + \beta_2 IPM_{it} + \varepsilon_{it}$$

### 3. Result and Discussion

#### 3.1 Result

Multivariate normality testing was carried out by looking at the multivariate CR value which can be seen in the bottom row of Table 1. Because the multivariate CR value is smaller than  $\pm 2.58$ , it can be concluded that this study has a normal distribution. Thus, in testing the data for SEM modeling which was carried out using single normality tests and multivariate normality tests, there was no evidence that the data used was not distributed abnormally, therefore the assumption of normality was fulfilled and the power used in this study was suitable for use in further estimations. . The results of the analysis are presented in Table 1 below.

**Table 1. Data Normality Test Results**

Variable	min	max	skew	c.r	kurtosis	c.r
BMPD	11203.220	290101.000	.680	4.466	.221	1.311
IPM	44.311	55.300	-1.180	-1.224	.182	.722
PTK	32445.000	648895.000	-.357	-2.244	.002	.021
PE	1.010	7.900	-.669	-4.022	.211	1.121
Poverty	3.120	33.420	.210	2.390	-.524	-2.245
Multivariate					1.437	1.242

Data processing results: 2024

#### Multikolinearitas

Multicollinearity is used to see whether the research data contains multicollinearity in combinations of variables, so what needs to be observed is the determinant of the sample covariance matrix. The existence of multicollinearity or singularity can be identified through the determinant value of the covariance matrix which is really small, or close to zero

(Tabachnick & Fidell, 1998 in Ghozali, 2011). Based on the results of data processing in this research, the determinant values of the sample covariance matrix are as follows:

$$\text{Determinant of sample covariance matrix} = 7.50 \times 10^2$$

These results indicate that the determinant value of the sample covariance matrix is far from zero. So it can be said that the research data used does not contain multicollinearity and singularity. The freedom of the data from multicollinearity and singularity deviations shows that the data is suitable for use for research.

### Evaluation Assesses Model Fit

Goodness of Fit measures the suitability of the observed or actual input (covariance or correlation matrix) with the predictions of the proposed model. There are three types of goodness of fit measures, namely (1) absolute fit measures, (2) incremental fit measures and (3) parsimonious fit measures. Absolute fit measures measure the overall fit of the model (both the structural model and the measurement model together), while incremental fit measures measure to compare the proposed model with other models specified by the researcher and parsimonious fit measures make adjustments to fit measurements so that they can be compared between models. different number of coefficients. This research uses absolute fit measures and incremental fit measures.

Calculations using the AMOS 20 program for the SEM model in this research resulted in the following goodness of fit indices:

**Table 2. Evaluation of Goodness of Fit Index Criteria**

Goodness of Fit Index	Cut off Value	Hasil Model	Keterangan
Chi Square	Kecil	6,9	Baik
Probability	$\geq 0,05$	0,29	Marginal
CMIN/DF	$\leq 5$	3,8	Baik
GFI	0 – 1,0	0,89	Baik
RMSEA	0,05 – 0,08	0,85	Marginal
AGFI	$\geq 0,80$	0,83	Baik
TLI	$\geq 0,80$	0,83	Baik
NFI	$\geq 0,80$	0,89	Baik

Data processing results: 2024

Based on Table 2, it can be concluded that the overall model can be accepted and can analyze the parameter estimate for the next step. In this study, although the results of the probability value are marginal with a value of 0.29, the results of CMIN / DF, namely the chi-square divided by the degree of freedom of 3.8 which according to Wheaton et Al (1977) (Ghozali: 2005) the ratio value of 5 (five) or less than five is a reasonable or acceptable measure. Other researchers such as Byrne (1988) propose that this ratio value  $< 2$  is a measure of fit.

### 3.2 Discussion

#### **There is a positive influence of Regional Government Capital Expenditures on Economic Growth**

The hypothesis states that capital expenditure has a positive effect on economic growth. The test results of the estimated parameters (standardized regression weight) between capital expenditure and economic growth show a positive relationship of 0.188. The critical ratio (CR) value is 3.469, the CR value is above the critical value of  $\pm 1.96$  or by looking at the pvalue it is below the significance value of 0.05, which is indicated by a sign (\*\*\*) . Thus, the first hypothesis shows that capital expenditure has a positive effect on economic growth, which is acceptable because it is significant.

#### **There is a positive influence of Labor Absorption on Economic Growth**

The hypothesis states that absorbed labor has a positive effect on economic growth. The test results of the estimated parameters (standardized regression weight) between absorbed labor and economic growth show a positive relationship of 0.159. The critical ratio (CR) value is 2.739, the CR value is above the critical value of  $\pm 1.96$  or by looking at the pvalue it is below the significance value of 0.05, namely 0.006. Thus, the second hypothesis shows that absorbed labor has a positive effect on economic growth, which is acceptable because it is significant.

#### **There is a positive influence of the Human Development Index on Economic Growth**

The hypothesis states that the Human Development Index (HDI) has a positive effect on economic growth. The test results of the estimated parameters (standardized regression weight) between the Human Development Index (HDI) and economic growth show a positive relationship of 0.453. The critical ratio (CR) value is 8.199, the CR value is above the critical value of  $\pm 1.96$  or by looking at the pvalue it is below the significance value of 0.05, which is indicated by a sign (\*\*\*) . Thus, the third hypothesis shows that the Human Development Index (HDI) has a positive effect on economic growth, which is acceptable because it is significant.

#### **There is a negative influence of Economic Growth on Poverty**

The hypothesis states that economic growth has a negative effect on economic growth. The test results of the estimated parameters (standardized regression weight) between economic growth and poverty do not show a negative relationship. The critical ratio (CR) value is 0.577, the CR value is below the critical value of  $+1.96$  or by looking at the p-value it is above the significance value of 0.05, namely 0.544. Thus, the fourth hypothesis shows that economic growth has a negative effect on poverty and cannot be accepted because it is not significant.

#### **There is a negative influence of the Human Development Index on Economic Growth**

hypothesis states that the Human Development Index (HDI) has a negative effect on economic growth. The test results of the estimated parameters (standardized regression weight) between the Human Development Index (HDI) and economic growth show a negative relationship of -0.694. The pvalue is below the significance value of 0.05, which is indicated by a sign (\*\*\*) . Thus, the fifth hypothesis shows that the Human Development Index (HDI) has a negative effect on economic growth, which is acceptable because it is significant.

#### 4. Conclusion

Based on the analysis of research results and discussion of the influence of regional government capital expenditure, Human Development Index, labor absorption on economic growth and poverty in Palopo City, it can be concluded that:

1. Regional government capital expenditure has a significant influence and has a positive relationship on economic growth in Palopo City.
2. The Human Development Index has a significant effect and has a positive relationship with economic growth in Palopo City.
3. Labor absorption has a significant effect and has a positive relationship with economic growth in Palopo City.
4. Economic growth has no significant effect on poverty in Palopo City.
5. The Human Development Index has a significant effect and has a negative relationship on poverty in Palopo City.

#### Suggestion

Based on the conclusions produced in this research, several suggestions are presented which are expected to be useful for local governments and the community as well as for future research, namely as follows:

1. In increasing economic growth and reducing poverty levels, local governments should be wiser in determining the capital expenditure budget in the APBD because the size of the budget can directly influence increasing economic growth and indirectly reducing poverty levels.
2. Increased economic growth cannot necessarily reduce poverty because economic growth is not spread evenly in each region so regional competitiveness is needed so that each region can increase its per capita income which can then reduce poverty levels.
3. Apart from increasing economic growth, regional governments are expected to pay more attention to human development to reduce poverty levels.
4. The large availability of labor must be accompanied by adequate abilities both academically and skills because to increase economic growth requires the ability to master technology.

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