THE EFFECT OF POPULATION GROWTH AND GROSS REGIONAL DOMESTIC PRODUCT (GRDP) ON THE LEVEL OF UNEMPLOYMENT IN THE CITY OF MAKASSAR

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ABSTRACT

Economic growth is always a concern in many aspects of community life including issues related to unemployment and production. Therefore, this research aims to determine the impact of population growth and GRDP on the unemployment rate in Makassar City. The data analysis is used multiple linear regression. The result of this research indicate that population growth has an impact on the unemployment rate in Makassar City, because the growth that occurs is caused by the productive population in age levels in the job seeker group. The GRDP growth in Makassar City is followed by an unemployment rate even though the figure is small.
Keywords: Population, Gross Regional Domestic Product, Unemployment

INTRODUCTION

Economic growth is the development of activities in the economy that cause goods and services produced in society to increase so that it will increase the welfare of the community. According to Sukirno (2015) Economic growth and economic development have different meaning, economic growth is the process of increasing per capita output continuously in the long term, economic growth is one indicator of the success of development in a region. The hiher the economic growth, the society welfare will increase.

One of the indicators to measure the success of development in a country is economic growth, the growth itself can be interpteted as a description of the impact of policies implemented in the economic sector.

Economic development is an effort to improve the standard of living of a nation which is often measured by level of real income per capita (Suparmoko; 2005). One of the goals of national development is to improve economic performance in order to create jobs and provide a decent life for the community.

The success of a development by a country or region can be seen from the development of exisiting economic indicator, whether an increase or decrease in Gross Regional Domestic Product (GRDP) is included in one of the indicators of a country's development. One of the important indicators to determine the condition of a region in a certain period is the Gross Regional Domestic Product (GRDP) Data, both at current prices market and at constant prices market, from this indicator we will get an overview of the level of economic growth and the level of welfare of a region.

Economic growth is related to population growth, which is a dynamic balance between the forces that increase and the forces that reduce the number of people continuously, the population will be affected by the number of babies born (fertilitiy) but simultaneously it will also be reduced by the number of deaths (mortality) that occurs in all age groups and population movement (mobility) will also affect the increase or decrease in the population in an region.

Knowledge of population is important to be known by the wider community which can stimulate awareness and foster responsible behavior towards population problems, problems that exist can be handled together with attention and allow any problems to arise can be prevented or avoided. In addition, labor is also a factor that affects the output of a region. A large work force will be formed from a large population, but the population growth could cause significant adverse effect on economic growth. According to Todaro (2011), rapid population growth encourages the emergence of underdevelopment issues and makes development prospects even farther away. Besides the population problem arises not because of the large number of family members, but because they are concentrated in urban areas as a result of the rapid pace of migration from rural to urban. However, a sufficient number of people with inadequate skills can cause unemployment.

One of the serious problems faced in Indonesia today is the problem of unemployment. Unemployment is an employment problem which has reached a quite concerning condition. The number of unemployed and underemployed has increased, on the other hand, high unemployment and under emplotment are a waste of existing resources and potential, become a burden to families and communities, the main source of poverty can encourage increased social and crimanl unrest, and can hinder development in the long term. Thus it is deemed necessary to further study the effect of Population Growth, Gross Regional Domestic Product on the Unemployment Rate in Makassar City.

Formulation of the Problem
Based on the background of the problem raised problems can be formulated as follows; Does population growth affect unemployment in Makassar City? Does the Gross Regional Domestic Product affect unemployment in Makassar City?

LITERATURE REVIEW
Population Growth
Population growth is the change in population in a region at a certain time compared to the previous time. The more widespread of the population growth in a region that will be the more people who are unemployed or do not have a job because the jobs created are not eligible for a population that is growing every year (Sadono, 2015:70).

Indicator of population growth is very useful for predicting the number of residents in a region or country in the future. By knowing the number of future population, the basic needs of this population are also known, not only in the social and economic fields but also in the political field.

According to the view of classical economists there are four factors that influence economic growth, is population, the amount of stock of capital goods, land area and natural resources, and the level of technology used. Despite realizing that economic growth depends on many factors (Soediyono, 1984:99). Classical economists especially focus their attention on the effect of population growth on economic growth (Sadono, 2011:433).

Thomas Robert Malthus, complied a formulation that humans can only multiply their food according to arithmetic series, while population growth always follows a geometric sequence. To

the experts who have an optimistic view that the human ability to improve the quality of life is lower than the ability to multiply the number of children. To get out of this problem, population growth must be limited through two ways, namely preventive checks and positive checks. Preventive checks can be carried out in two ways, namely moral restraint (self-restraint) is all efforts to curb sexual desire and vice is reducing births such as abortion and contraceptive use. Then, positive checks can be carried out through the death ptocess such as the presence of various diseases and epidemics, natural disaster, famine, food shortages and war (Tukiran; 2014).

Economist Leibenstein in his book A Theory of Economic-Demographic Development, he proposes the concept of the low-level equilibrium trap which explains demographic changes in developing countries. A slight increase in income will elimate growth in capital, producitivy, and other sources of economic growth (Sri M.A and Omas B.S; 2016).

Gross Regional Domestic Product

One indicator of development success can be seen from the rate of economic growth, economic growth is defined as an increase in Gross Regional Domestic Product (GRDP) or Gross National Product (GNP) regardless of an increase greater or smaller than the population growth rate, or changes in economic structure has happened (Kamaluddin ; 1999).

Gross Regional Domestic Product (GRDP) can describe the national income of a country. Sadono Sukirno (2011; 28) states that a high level of national will affect community income and high community income will increase the demand for goods and services. Gross Regional Domestic Product different with Gross National Product because it includes income production factors from foreign who work in that country. So that GRDP calculates the total production of a country without taking into account whether the production is carried out using domestic production factors or not.

Analysis mechanism (performance) of the national economy the GRDP is conceptually based on those used three kinds of approaches:

1. Production Approach
   Gross Regional Domestic Product (GRDP) is the amount of added value for goods and services produced by various production units in an area within a certain period (one year).
2. Expenditure Approach
   Gross Regional Domestic Product (GRDP) is a component of final demand which consist of consumption expenditure by household, non-profit institutions, government consumption, gross fixed capital formation, change inventories, and net exports (which are exports minus imports).
3. Income Approach
   Gross Regional Domestic Product is the amount of remuneration received by production factors that participate in the production process in an area within a certain periode of one year, the remuneration in question is wages and salaries, land rent, capital inteset and all profits before less income tax and other direct taxes.

UNEMPLOYMENT

Unemployment is a macroeconomic problem that affects humans (Mankiw, 2016; 154) while unemployed people are those who do not have a job, the category of unemployed people is usually those who do not have a job at the working age and working period. Working age is usually the age who is not at school but above the age of children (relatively over 6-18 years old, is education from elementary school until completed high school) while those above 18 years old but still in school can be categorized as unemployed.

Unemployment is a condition in which someone who belongs to the labor force wants to get a job but they have not been able to get the job (Sukirno, 2016) while according to Kaufman

and Hotchkiss (1999), unemployment is a measurement that is taken if someone does not have a job but they are actively doing business in the last four weeks looking for job.

In theory, the occurrence of unemployment is due to an excess supply of labor compared to the demand for labor in the labor market (Hotchkiss; 1999), unemployment will appear in an economy due two things:

a. Job search process
   This process provides important theoretical explanations for unemployment. The emergence of a new workforce will create intense competition in the job search process. In this process there are obstacle in finding work; because there are worker who want to move to other jobs, basically imperfect levels of wages they receive and others.

b. Wage rigidity
   The amount of unemployment that occurs is influenced by wages that are not flexible in the market, which will result in a shift or decrease in the amount of wages set. With wage rigidity, in the short term, the wage rate will increase at the original wage level, so that it will cause an excess supply of labo as an indication of the unemployment rate to wage rigidity.

To find out the size of the unemployment rate can be observed through two approaches, including the following:

1. Workorce approach
   The size of the unemployment rate is calculated based on a percentage of the ratio of the number of unemployed people and the total workforce.

2. Manpower utilization approach
   Determine the size of the unemployment rate based on the labor utilization approach, among others;
   a. Full working (employed) is people who work full hours or working hours of up to 35 hours per week.
   b. Underemploymed, is those who work, but are not fully utilized, meaning that their working hours in a week are less than 35.

METHOD
Research Approach
The approach used in this research is a quantitative approach by selecting the variable Population Growth and Gross Regional Domestic Product with the independent variable, while the unemployment rate as the dependent variable. The data used in this research is secondary data.

Research Location
This research was conducted in Makassar City, considering Makassar City as a Metropolitan City which has an unemployment rate. In addition, high economic acitivty can lead to an influential workforce.

Method of Collecting Data
The data collection method used was through documentation in the form of reports sourced from Central Bureau of Statistics Makassar, the data included:
a. Gross Regional Domestic Product (GRDP) Makassar City
b. Total Population
c. Total Unemployment

Data Analysis Method

The analysis technique used is a multiple regression analysis model, this is because the dependent variable (unemployment) is influenced by Population Growth and Gross Regional Domestic Product.

1. Normality Test
2. Hypothesis Tset Individually (T Test)
3. Multiple Linear Regression Analysis

The multiple linear regression equation is explicitly written as follows:

$$Y = b_0 + b1\ X1 + b2\ X2 + e$$

Where
Y   = Unemployment Rate
X1   = Population Growth
X2   = Gross Regional Doemstic Product
B0   = Constant Value
E   = Error Factor
b1 b2 = Regression Coefficient

RESULT AND DISCUSSION

1. Research Variable

This research investigates the effect of Gross Regional Domestic Product and Population Growth on the unemployment rate in the city of Makassar in year 2010-2019. Yhe analytical tools used in this research using multiple regression models are used to see the effect of GRDP and population gowth on the unemployment rate can be seen in Table 1 for each variable

Table1. Population Growth, GDRP and Unemployment Rate
In Makassar City Year 2010-2019

Year	Total Population People (X1)	GDRP (Rp.000) (X2)	Unemployment People (Y)
2010	1.339.374	58.556.476	78.208
2011	1.352.136	64.622.103	45.664
2012	1.369-606	70.851.035	51.596
2013	1.408.072	76.907.410	52.619
2014	1.429.242	82.592.004	55.623
2015	1.449.401	88.740.213	53.650
2016	1.469.601	95.957.638	71.604
2017	1.489.011	103.857.071	64.954
2018	1.508.154	112.568.414	64.935
2019	1.526.677	115.019.915	58.442

Source: BPS Makassar in Figures Year 2020 (data reprocessed)

In Table 1, we can see the total population, economi growth rate (GDRP) and unemployment rate in Makassar City from 2010-2019. The total of population developments has increased from year to year, likewise the GDRP has increased from year to year, this is because it coincides with the incessant infrastructure development that encourages economic turnover. While the unemployment rate fluctuated, the highest unemployment rate was in 2010 is 78.208 people.

2. Multiple Linear Regression Analysis

Multiple linear regression analysis aims to determine whether there is a quantitative effect of a change in event (variable X) towards the incidence of other variables. Multiple linear analysis is used to tes the effect of two or more independent variables towards one dependent variable. The effect of regression can be seen in the coefficients test table. To find out the coefficient variable of Population, GRDP and Unemployment can be seen in Table 2 below.

Table 2. Independent Variable Coefficient

Coefficients[a]

Model	Unstandardized Coefficients		Standardized Coefficients	t	Sig.
	B	Std. Error	Beta		
1 (Constant)	-69001.052	46119.381		-1.496	.178
Population Growth	.084	.032	.552	2.659	.033
Gross Domestic Regional Product	5.927E-5	.000	.931	4.486	.003

a. Dependent Variable: Unemployment

Based on Table 2, the multiple regression equation can be obtained as follows;

$Y = b_0 + b_1X_1 + b_2X_2 + e_i$
$Y = - 69.001 + 0,084 X_1 + 0,00005927$

From the regression equation, it can be interpreted as follows;
  a. The coefficient b_0 = -69.001 means that if the total population and Gross Regional Domestic Product are 0 or constant, unemployment will decrease by 69.001.
  b. The coefficient b_1 = 0.084 indicates that a one persen increase in population results in unemployment in Makassar city increasing by 0.084 percent, assuming a constant Gross Regional Domestic Product.
  c. The coefficient b_2 = 0.00005927 shows that if the Gross Regional Domestic Porduct increases by one percent, it will result in unemployment in Makassar City increasing by 0.00005927 assumsing a constant population.

Hypothesis Testing
The coefficient of determination (R^2)
The coefficient of determination in essence measures how far the model's ability to explain the dependent variables, a small value means that the ability of the independent variable to explain the dependent variable is very limited.

Table 3. Simultaneous Significance Test

Model Summary[b]

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate	R Square Change	F Change	df1
					Change Statistics		
1	.866[a]	.749	.678	5697.92906	.749	10.467	2

Predictors: (Constant), Gross Regional Domestic Product, Population Growth
Dependent Variable: Unemployment.

The Effect of Total Population on Unemployment in Makassar City

The coefficient value which is positive at 0.084 indicates that an increase in the population of one percent will br followed by an increase in unemployment of 0.084%. The existence of a positive relationship between the population and the unemployment rate means that the increase in population has an impact on the unemployment rate in the city of Makassar. If the population in Makassar is increasing, in the long run this influence will be a factor that can increase unemployment.

The population growth that occurred in Makassar City in the period 2010-2019 caused an increase in unemployment, it was due to the population growth that entered Makassar City during the period of this research were those in the age group of job seekers, but not all of the population entered domiciled in the city of Makassar, got a job during that time, resulting in an increase in unemployment.

The results of this study are in line with research conducted by Jihad and Daryono (2014) which states that the population has a positive result on the unemployment rate. This means that the growing population will cause unemployment. In contrast to research conducted by Dita (2018) states a negative relationship between residents and open unemployment. When the population increases, companies need more labor to be absorbed so that it will have an impact on economic development.

Effect of Gross Regional Domestic Product on Unemployment in Makassar City

From the results of data processing with SPSS shows a regression coefficient of 0.00005927, this indicates that the economic growth that occurred in the city of Makassar in the period 2010-2019 was followed by a relatively low unemployment rate. This indicates that the economic growth that occurs is the result of changes in land use change from agriculture to industry so that the formerly unproductive agricultural land. In encouraging economic growth, it is converted into a location for industrial and service activities so as to create economic growth. Even though they have access to unemployment that follows economic growth as a result of workers who previously worked in the agricultural sector, they lose their jobs because they find it difficult to enter the industrial and services sectors, resulting in unemployment.

The relationship between the level of GDRP which affects the unemployment rate is based on Okun's Law. Which explains that if there is an increase in PDRB in an area, the absorption of labor will also increase which has an impact on the total of unemployed. Okun's thesis assumes that employment that arise due to economic growth can absorb labor, but in the context of research conducted in Makassar City during the 2009-2019 period. This shows a different condition in the assumptions because economic growth that occurs as a result of changes in activities from the agricultural sector to the industrial and service sectors certainly requires a level of education and skills in accordance with the needs of the sector.

The result of the research are the same as those conducted by Trianggono and Sitti (2017) which states that the GDRP positive results on unemployment. The results of other research conduceted by Rio Laksamana (2017) state that the opposite relationship is that GRDP has a negative relationship with unemployment.

CONCLUSIONS AND RECOMMENDATIONS
Conclusion

Population growth affects the unemployment rate in Makassar City, because the population growth that occurs is caused by the population entering the age level of the job seekers, because Makassar City is the destination city for job seekers and most of those who enter are domiciled in Makassar City. Not all of them find jobs so population growth creates unemployment.

Growth of Gross Regional Domestic Product (GDRP) in Makassar City is followed by an unemployment rate even though the figure is very small, but it can be interpreted that the GDRP

growth is a change in the function of land in urban areas from the agricultural sector to the industrial and service sectors. There is a gap between the level of education and skills of workers in the agricultural sector and the industrial sector, causing unemployment to follow the GDP growth.

RECOMMENDATIONS

1. To resolve with population growth that causes increased unemployment, it is necessary to empower working age groups in Makassar City through job training that is in accordance with industry needs and entrepreneurship training. Therefore, people in the working age group can work independently and do not need to look for work but can instead open jobs that can absorb labor so that it can be a discussion in reducing unemployment in Makassar City.
2. In encouraging GDRP growth in Makassar City, the government must consider the existing business sector as much as possible to create job opportunities so that it can absorb the working age group to work in every existing business field.

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