THE EFFECT OF POPULATION GROWTH ON POVERTY THROUGH UNEMPLOYMENT IN EAST JAVA PROVINCE IN 2017-2021

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ABSTRACT
In 2022, the number of poor people in Java is ranked first in Indonesia, as many as 4.181,290 inhabitants (semester one) and 4.236,510 inhabitants (second semester). Factors are the cause of population growth and unemployment rates. This research aims to measure and determine the effect of population growth on poverty through the unemployment rate as a mediating variable. This research uses quantitative methods. Data collection techniques were obtained from the Central Statistics Agency (BPS) of East Java Province in the form of time series data from 201 to 2021. Data analysis techniques include classical assumption tests, path analysis tests and Sobel tests through IBM SPSS Statistics 25 software and online statistics calculators. The results of this research show that population growth has a positive and insignificant effect on poverty. The result of the regression coefficient is a positive direction of 0.324 with a significance value of 0.091 > 0.05. In addition, people without progress in other developmental factors will not increase income. Population growth has a positive and significant effect on the unemployment rate. The resulting regression coefficient is a positive direction of 0.225 with a significance value of 0.004 < 0.05. The increase in population cannot be fully absorbed by the company. The unemployment rate has a negative and significant effect on poverty. Theregression coefficient is a negative direction of -0.948 with a significance value of 0.000 < 0.05. Unemployment is not necessarily low or underprivileged. Because they are from families with sufficient income. Population growth on poverty mediated by the unemployment rate is a negative effect and there is no mediated effect. The result of the sobel test obtained an Unstandardized Coefficients B value of -0.213 and an Unstandardized Coefficients Std Error value of 0.085 > 0.05.

Keywords: Population Growth, Poverty, Unemployment Rate.

INTRODUCTION
Poverty is a condition that is often associated with an inability on the economic side in order to meet the needs of daily life (Utami & Masjkuri, 2018). Absolute poverty is measured based on the inability to meet minimum basic needs such as food, clothing, health, housing and education needed to live and work (Agustini & Kurniasih, 2017). Minimum basic needs are defined as financial measures in the form of money and the minimum needs of basic needs are called the poverty line (Agustina et al., 2018). People whose income is below the poverty line are classified as poor (Primandari, 2018).

Table 1
Top Ten Provinces in Indonesia with the Poorest People in 2022
(In Thousand Souls)

<table>
<thead>
<tr>
<th>No.</th>
<th>Province</th>
<th>Number of Poor People</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td>Semester I (March)</td>
</tr>
<tr>
<td>1.</td>
<td>East Java</td>
<td>4.181,29</td>
</tr>
<tr>
<td>2.</td>
<td>West Java</td>
<td>4.070,98</td>
</tr>
<tr>
<td>3.</td>
<td>Central Java</td>
<td>3.831,44</td>
</tr>
<tr>
<td>4.</td>
<td>North Sumatra</td>
<td>1.268,19</td>
</tr>
</tbody>
</table>
The Effect of Population Growth on Poverty Through Unemployment in East Java Province in 2017-2021

<table>
<thead>
<tr>
<th>No.</th>
<th>Year</th>
<th>Number of Poor People (In Thousand Souls)</th>
</tr>
</thead>
<tbody>
<tr>
<td>5</td>
<td>2017</td>
<td>4.617,01</td>
</tr>
<tr>
<td>6</td>
<td>2018</td>
<td>4.332,59</td>
</tr>
<tr>
<td>7</td>
<td>2019</td>
<td>4.112,25</td>
</tr>
<tr>
<td>8</td>
<td>2020</td>
<td>4.419,10</td>
</tr>
<tr>
<td>9</td>
<td>2021</td>
<td>4.572,73</td>
</tr>
</tbody>
</table>

*Source BPS RI, 2022 (data processed)*

In table 1 it can be seen that the number of poor people in East Java in 2022 is in the first place in Indonesia, with the number of poor people in the first semester as many as 4.181,290 people and second semester as many as 4.236,510 inhabitants in 2022. Although the number of poor people in Java tends to fluctuate from 20 to 20 to 21. This can be seen in tabel 2 as follows:

Table 2
Number of Poor People in East Java Province in 2017-2021
(In Thousand Souls)

<table>
<thead>
<tr>
<th>No.</th>
<th>Year</th>
<th>Number of Poor People</th>
</tr>
</thead>
<tbody>
<tr>
<td>5</td>
<td>2021</td>
<td>4.572,73</td>
</tr>
</tbody>
</table>

*Source BPS RI, 2022 (data processed)*

Table 2 shows that the number of poor people in East Java in 2017 was 4,617,010 people, in 2018 it decreased to 4,332,590 people and in 2019 it again decreased to 4,112,250 people. However, in 2020 it increased to 4,419,100 people and in 2021 it increased again to 4,572,730 people. Java Timur Province consists of 29 regencies and 9 cities. The number of poor people in Kota tends to be lower than the number of poor people in Kabupaten.

Based on data from the Indonesian Statistics Center (BPS RI) in 2022, it has shown that the poverty rate in East Java province is very high with the first place in Indonesia (BPS RI, 2022). So that this must be addressed with government policy strategies that lead to the achievement of a just and prosperous society (Wirawan & Arka, 2015). Because the main indicator of success in the economic development of a region is reducing the poverty rate (Nabawi, 2020). The goal of economic development is strongly emphasized by the President of the Republic of Indonesia, Mr. Ir. H. Joko Widodo through Presidential Instruction No. 4 of 2022 concerning the Acceleration of the Elimination of Extreme Poverty throughout Indonesia by 2024. With the integration and synergy of programs and cooperation between ministries/agencies and provincial/district/city local governments (Iqbal, 2022).

Some of the factors that cause the increase in poverty are population growth factors. This is in accordance with research conducted by previous researchers which showed that population growth has a positive and significant effect on poverty levels (Sari, 2021; Hilmi et al., 2022;
Ritonga & Wulantika, 2020). Population growth has an influence on the poverty rate, because rapid population growth is the cause of high poverty (Putra et al., 2021). Then the unemployment rate factor is also the cause of the increase in poverty. This is in accordance with research conducted by previous researchers which showed that the unemployment rate has a positive and significant effect on the poverty rate (Lismana & Sumarsono, 2020; Fadilllah et al., 2016; Ningrum, 2017). A high unemployment rate can reduce the wages of people with low incomes so that income inequality or poverty is higher (Hindun et al., 2019). Furthermore, the population growth factor is also the cause of high unemployment. This is in accordance with research conducted by previous researchers which showed that population growth has a positive and significant effect on the unemployment rate (Taime & Djaelani, 2021; Sisnita & Prawoto, 2017; Albarqi, 2016). The higher the population growth, the more unemployed the population will be. This proves that large population growth will cause unemployment (Ayuningtyas, 201: 8).

Based on the explanation that has been described and the existence of several research gaps from relevant previous studies, this study aims to measure and know the effect of population growth on poverty through unemployment rate as a mediating variable. The similarity of this research with previous research lies in the type of data used, namely time series data from the Central Statistics Agency (BPS) of the Republic of Indonesia. The difference between this study and previous research lies in the collection of data used, namely the data is determined based on a period of five years so that the novelty of the data is the most recent and clarity in the discussion will be more specific or detailed. Data analysis techniques in this study are classical assumption tests, path analysis tests and sobel tests as the methods used in this study. So that the results of this research are expected to be a benchmark for the government in determining effective policy strategies in reducing poverty in East Java province and relevant for scientific development and further research.

**METHOD**

**Types of Research**

In this research, applying quantitative research methods in associative form using one independent variable yes it is population growth, one dependent variable yes it is poverty and one mediating variable yes it is unemployment rate. Quantitative methods use research data in the form of numbers and statistical analysis (Sugiyono, 2016). The data used is time series data from 201 to 2021 obtained from the Central Statistics Agency (BPS) of East Java Province. The secondary data is processed using the Path Analysis method which is an extension of regression analysis to determine the direct and indirect influence between the independent variable on the dependent variable through mediation variables. Data collection techniques using documentation and processing methods as well as quantitative data analysis include classical assumption tests, path analysis tests and sobel tests which all use the help of IBM SPSS Statistics 25 software and online statistics calculators through website https://danielsoper.com/.
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Basic Research Framework
The conceptual framework model in *Path Analysis* is as follows:

![Conceptual Framework Model](image)

**Figure 1.** Conceptual Framework Model

Information:
- : Directly Influential
- : Indirectly Influential

Research Hypothesis:
H1: Population Growth Has a Significant Effect on Poverty
H2: Population Growth Has a Significant Effect on the Unemployment Rate
H3: Unemployment Rate Has a Significant Effect on Poverty
H4: Population Growth Has a Significant Effect on Poverty through Unemployment Rate

The relationship equation model in Path Analysis is as follows:

\[ Z (\text{Unemployment Rate}) = a + bX (\text{Population Growth}) \] (1)
\[ Y (\text{Poverty}) = A + bX (\text{Population Growth}) + bZ (\text{Unemployment}) \] (2)

Research Problems
Research Problems:
- Does Population Growth Affect Poverty through the Unemployment Rate in East Java Province from 2017 to 2021?

Research Questions:
1. Does Population Growth Have a Significant Effect on Poverty?
2. Does Population Growth Have a Significant Effect on the Unemployment Rate?
3. Does the Unemployment Rate Significantly Affect Poverty?
4. Does Population Growth Significantly Affect Poverty through Unemployment?
RESULTS AND DISCUSSION

Research Results

Variable Relationship Model

Panel A
There is a Direct Relationship of Population Growth (X) affecting Poverty (Y)

Figure 2. Direct Variable Relationship Model

Panel B
There is an Indirect Relationship of Population Growth (X) affecting Poverty (Y) through the Unemployment Rate (Z)

Figure 3. Indirect Model of Variable Relationships

Classical Assumption Test

Normality Test

Table 3

Kolmogorov-Smirnov Test

<table>
<thead>
<tr>
<th></th>
<th>Unstandardize Residuals</th>
</tr>
</thead>
<tbody>
<tr>
<td>N</td>
<td>153</td>
</tr>
<tr>
<td>Normal Parametersa,b</td>
<td></td>
</tr>
<tr>
<td>Mean</td>
<td>.0000000</td>
</tr>
<tr>
<td>Std. Deviation</td>
<td>.11204033</td>
</tr>
<tr>
<td>Most Extreme Differences</td>
<td></td>
</tr>
<tr>
<td>Absolute</td>
<td>.056</td>
</tr>
<tr>
<td>Positive</td>
<td>.039</td>
</tr>
<tr>
<td>Negative</td>
<td>-.056</td>
</tr>
<tr>
<td>Test Statistics</td>
<td></td>
</tr>
<tr>
<td>Asymp. Sig. (2-tailed)</td>
<td></td>
</tr>
<tr>
<td></td>
<td>.200^a</td>
</tr>
</tbody>
</table>
The Effect of Population Growth on Poverty Through Unemployment in East Java Province in 2017-2021

Based on table 3 shows the value of Asymp. Sig. (2-tailed) of 0.200 more than the value of Standart Sig. 0.05 or (0.200 > 0.05). So this shows that the variable data of population growth on poverty through the unemployment rate is normally distributed.

Multicollinearity Test

Equation 1

<table>
<thead>
<tr>
<th>Type</th>
<th>Coefficientsa</th>
<th>t</th>
<th>Sig.</th>
<th>Collinearity Statistics</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Unstandardized Coefficients</td>
<td>Standardized Coefficients</td>
<td>t</td>
<td>Collinearity</td>
</tr>
<tr>
<td></td>
<td>B</td>
<td>Std. Error</td>
<td>Beta</td>
<td></td>
</tr>
<tr>
<td>(Constant)</td>
<td>3.860</td>
<td>.242</td>
<td>15.944</td>
<td>.000</td>
</tr>
<tr>
<td>Population Growth</td>
<td>.225</td>
<td>.078</td>
<td>.206</td>
<td>2.887</td>
</tr>
</tbody>
</table>

a. Dependent Variable: Unemployment Rate

Based on table 4, it shows a Tolerance value of 1,000 more than 0.10 or (1,000 > 0.10) and a VIF value of 1,000 less than 10 (1,000 < 10). So this shows that the variable data of population growth on the unemployment rate, there is no multicollinearity.

Equation 2

<table>
<thead>
<tr>
<th>Type</th>
<th>Coefficientsa</th>
<th>t</th>
<th>Sig.</th>
<th>Collinearity Statistics</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Unstandardized Coefficients</td>
<td>Standardized Coefficients</td>
<td>t</td>
<td>Collinearity</td>
</tr>
<tr>
<td></td>
<td>B</td>
<td>Std. Error</td>
<td>Beta</td>
<td></td>
</tr>
<tr>
<td>(Constant)</td>
<td>14.394</td>
<td>.887</td>
<td>16.227</td>
<td>.000</td>
</tr>
<tr>
<td>Population Growth</td>
<td>.324</td>
<td>.190</td>
<td>.118</td>
<td>1.701</td>
</tr>
<tr>
<td>Unemployment Rate</td>
<td>-.948</td>
<td>.174</td>
<td>-.377</td>
<td>-5.440</td>
</tr>
</tbody>
</table>

a. Dependent Variable: Poverty

Based on table 5, it shows the Tolerance value of both 0.958 more than 0.10 or (0.958 > 0.10) and the VIF value of both 1.044 less than 10 (1.044 < 10). So this shows that the data on the variables of population growth on poverty and unemployment rate on poverty, both of which do not occur Multicollinearity.
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**Heteroscedasticity Test**

**Equation 1**

### Table 6

<table>
<thead>
<tr>
<th>Type</th>
<th>Unstandardized Coefficients</th>
<th>Standardized Coefficients</th>
<th>t</th>
<th>Sig.</th>
</tr>
</thead>
<tbody>
<tr>
<td>(Constant)</td>
<td>1.391</td>
<td>.162</td>
<td>8.565</td>
<td>.000</td>
</tr>
<tr>
<td>Population Growth</td>
<td>-.033</td>
<td>.052</td>
<td>-.046</td>
<td>-.636</td>
</tr>
</tbody>
</table>

a. Dependent Variable: Abs_Res1

Based on table 6 using the Glejser Test method shows the value of Probability Sig. 0.526 is more than the Alpha Sig value. 0.05 or (0.526 > 0.05). So this showsthat the variable data of population growth on the unemployment rate, heteroscedasticity does not occur.

**Equation 2**

### Table 7

<table>
<thead>
<tr>
<th>Type</th>
<th>Unstandardized Coefficients</th>
<th>Standardized Coefficients</th>
<th>t</th>
<th>Sig.</th>
</tr>
</thead>
<tbody>
<tr>
<td>(Constant)</td>
<td>3.747</td>
<td>.579</td>
<td>6.473</td>
<td>.000</td>
</tr>
<tr>
<td>Population Growth</td>
<td>-.018</td>
<td>.124</td>
<td>-.011</td>
<td>-.146</td>
</tr>
<tr>
<td>Unemployment Rate</td>
<td>-.119</td>
<td>.114</td>
<td>-.078</td>
<td>-1.048</td>
</tr>
</tbody>
</table>

a. Dependent Variable: Abs_Res2

Based on table 7 using the Glejser Test method shows the value of Probability Sig. 0.884 is more than the Alpha Sig value. 0.05 or (0.884 > 0.05). So this showsthat the data on the variable population growth on poverty, heteroscedasticity does not occur. Then the Probability value Sig. 0.296 is more than the Alpha Sig value. 0.05 or (0.296 > 0.05). So this showsthat the variable data on the unemployment rate on poverty, also does not occur heteroscedasticity.
Autocorrelation Test

### Table 8

<table>
<thead>
<tr>
<th>Runs Test</th>
<th>Unstandardized Residual</th>
</tr>
</thead>
<tbody>
<tr>
<td>Test Value&lt;sup&gt;A&lt;/sup&gt;</td>
<td>-0.01859</td>
</tr>
<tr>
<td>Cases &lt; Test Value</td>
<td>94</td>
</tr>
<tr>
<td>Cases &gt;= Test Value</td>
<td>95</td>
</tr>
<tr>
<td>Total Cases</td>
<td>189</td>
</tr>
<tr>
<td>Number of Runs</td>
<td>86</td>
</tr>
<tr>
<td>Z</td>
<td>-1.385</td>
</tr>
<tr>
<td>Asymp. Sig. (2-tailed)</td>
<td>0.166</td>
</tr>
</tbody>
</table>

<sup>a</sup> Median

Based on table 8 shows the value of Asymp. Sig. (2-tailed) of 0.166 more than the value of Standart Sig. 0.05 or (0.166 > 0.05). So this shows that the data on the variable population growth on poverty through the unemployment rate, there is no Autocorrelation.

### Path Analysis Test

The results of data processing (1) show:

### Table 9

**Regression Results of the 1st Relationship Equation Model**

<table>
<thead>
<tr>
<th>Type</th>
<th>Unstandardized Coefficients</th>
<th>Standardized Coefficients</th>
<th>t</th>
<th>Sig.</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>B</td>
<td>Std. Error</td>
<td>Beta</td>
<td></td>
</tr>
<tr>
<td>1</td>
<td>(Constant)</td>
<td>3.860</td>
<td>.242</td>
<td>15.944</td>
</tr>
<tr>
<td></td>
<td>Population Growth (X)</td>
<td>.225</td>
<td>.078</td>
<td>.206</td>
</tr>
</tbody>
</table>

<sup>a</sup> Dependent Variable: Unemployment Rate (Z)

Based on the data processing (1) it shows:

a. The p2 value is obtained from the *Unstandardized Coefficients B* value, which is 0.225 and the Sp2 value is obtained from the *Std. Error* value, which is 0.078.

b. If the *value of Unstandardized Coefficients B* Population Growth is 0.225 and *Sig.* at 0.004 < 0.05 then Population Growth Has a Positive and Significant Effect on the Unemployment Rate.
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The results of data processing (2) show:

Table 10
Regression Results of the 2nd Relationship Equation Model

<table>
<thead>
<tr>
<th>Type</th>
<th>Coefficientsa</th>
<th>Standardized Coefficients</th>
<th>t</th>
<th>Sig.</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Unstandardized</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>B</td>
<td>Std. Error</td>
<td></td>
<td>Beta</td>
</tr>
<tr>
<td>(Constant)</td>
<td>14.394</td>
<td>.887</td>
<td>16.227</td>
<td>.000</td>
</tr>
<tr>
<td>Population Growth (X)</td>
<td>.324</td>
<td>.190</td>
<td>.118</td>
<td>1.701</td>
</tr>
<tr>
<td>Unemployment Rate (Z)</td>
<td>-.948</td>
<td>.174</td>
<td>-.377</td>
<td>-5.440</td>
</tr>
</tbody>
</table>

a. Dependent Variable: Poverty (Y)

Based on the data (2) it shows:

a. The p1 value is obtained from the *Unstandardized Coefficients B* value, which is 0.324 and the Sp1 value is obtained from the *Std. Error* value, which is 0.190.

b. The p3 value is obtained from the *Unstandardized Coefficients B* value, which is -0.948 and the Sp3 value is obtained from the *Std. Error* value, which is 0.174.

c. If the value of *Unstandardized Coefficients B* Population Growth is 0.324 and *Sig. at 0.091 > 0.05* then Population Growth Has a Positive and Insignificant Effect on Poverty.

d. If the *value of Unstandardized Coefficients B* Unemployment Rate is -0.948 and *Sig. at 0.000 < 0.05* then the Unemployment Rate has a negative and significant effect on poverty.

Calculating Direct and Indirect Influences

a. Direct Influence
   (Population Growth = > Poverty) = p1
   (X = > Y) = 0.324

b. Indirect Influence
   (Population Growth => Unemployment Rate = > Poverty) = p2 x p3
   (X => Z => Y) = 0.225 x (-0.948) = -0.213

c. Total Direct and Indirect Influence= p1 + (p2 x p3)
   Total Influence= 0.324 + (-0.213) = 0.111

Sobel Test

To test the significance of indirect influence, it is necessary to calculate the value of t with the Sobel Test formula as follows:

\[
Sp2p3 = \sqrt{(p3^2, Sp2^2) + (p2^2, Sp3^2) + (Sp2^2, Sp3^2)}
\]

\[
Sp2p3 = \sqrt{((-0.948^2, 0.078^2) + (0.225^2, 0.174^2) + (0.078^2, 0.174^2)}
\]
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\[ \text{Sp}^{2}p^{3} = \sqrt{0.00546771514 + 0.0015327225 + 0.00018419918} \]
\[ \text{Sp}^{2}p^{3} = \sqrt{(0.00718463682)} \]
\[ \text{Sp}^{2}p^{3} = 0.08476223699 \]
\[ \text{Sp}^{2}p^{3} = 0.085 \]

\[ t_{\text{hitung}} = \frac{p_{2} \cdot p_{3}}{\text{Sp}^{2}p^{3}} \]
\[ t_{\text{hitung}} = \frac{-0.213}{0.085} \]
\[ t_{\text{hitung}} = -2.506 \]

If \( t_{\text{table}} = 1.96 \) with a significance level of 5% or 0.05 then \( t_{\text{hitung}} < t_{\text{table}} \) can be concluded that there is no mediation effect.

The results of the sobel test are online using statistical calculators through the https://danielsoper.com/ website. So that the calculation is obtained as follows:

![Figure 4. Results of the Sobel Test with Online Statistics Calculators](image)

So, the value of Unstandardized Coefficients B, which is -0.213. The values of Standardized Coefficients Beta are as follows:

\[
\text{Beta} = p_{2} \times p_{3} \quad (*\text{Use Standardized Beta Value})
\]
\[
= 0.206 \times (-3.77)
\]
\[
= -0.77662
\]
\[
= -0.777
\]
Table 11
Sobel Test Model Data Processing Results

<table>
<thead>
<tr>
<th>Type</th>
<th>Coefficientsa</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Unstandardized</td>
</tr>
<tr>
<td></td>
<td>B</td>
</tr>
<tr>
<td>(X = &gt; Y1 = &gt; Y2)</td>
<td>-. 213</td>
</tr>
</tbody>
</table>

So, it can be concluded that the indirect effect of X = > Z = > Y is Insignificant and Negative with the value of Sobel Test or Sp²p3, which is 0.085 and the value of Unstandardized Coefficients B, which is -0.213.

Discussion
Relationship between Population Growth (X) and Poverty (Y)

Based on the linear regression equation above, the result of the linear regression coefficient of population growth is a positive direction of 0.324 with a significance value of 0.091 which is more than the significance level of 0.05 or 5% as the probability standard used. So it tells that population growth has a positive and insignificant effect on poverty in 2017-2021 in East Java Province. The results of this study show that in the long run population growth has a positive effect on poverty. There are several things that make population growth an obstacle to development and have a positive effect on poverty. An increase in population growth without being accompanied by advances in other developmental factors will not increase income and demand. Thus, rising population growth will actually lower wage levels and also lower production costs.

According to Malthus (in Conway, 2015) the continuous increase in population growth is a necessary element to support additional demand, but on the other hand a high increase in population growth is feared to have an adverse effect on economic growth which impacts the prospects for poverty reduction and further development efforts (Conway, 2015). According to the World Bank (2016), most of Indonesia's population lives around the poverty line. With the increase in population, it also results in an increasing burden that must be borne by the head of the family in meeting his needs. Because of this increased burden, it is possible for a family that previously lived above the poverty line, to be included in the poor category, because the ability to meet their needs (income) is fixed, but the number of needs increases (World Bank, 2016). The results of this study are in accordance with previous research conducted by Trisnu & Sudiana (2019) which showed that population growth had a positive and insignificant effect on poverty in Regencies / Municipalities in Bali Province (Trisnu & Sudiana, 2019). However, the results of this study are also different from the previous one conducted by Suhandi et al. (2015) which states that population growth has a negative and significant effect on poverty in Palembang City (Suhandi et al., 2018).
Relationship between Population Growth (X) to Unemployment Rate (Z)

Based on the linear regression equation above, the result of the linear regression coefficient of population growth is a positive direction of 0.225 with a significance value of 0.004 which is less than the significance level of 0.05 or 5% as the probability standard used. So it tells that population growth has a positive and significant effect on the unemployment rate in 2017-2021 in East Java Province. The results of this study show that when there is an increase in population growth by 1%, it will increase the unemployment rate by 0.948%. The significance of population growth in influencing the unemployment rate in East Java Province is due to high population growth every year. Population growth has a positive and significant effect on East Java Province because of the high population growth caused by migration to the East Java region so that the increase in population cannot be fully absorbed by companies that provide jobs so that population growth will also increase the unemployment rate. East Java Province is also a trade and service area that should be able to absorb a lot of labor. However, due to very rapid technological advances, human power has slowly been replaced by machine power or sophisticated and modern technology in production activities.

According to Malthus (in Skousen, 2005) the higher the population growth, the more unemployed people will be. More clearly, the faster the population will produce more and more workers, but this is not balanced with existing job opportunities. From that small number of opportunities, humans compete with each other in obtaining jobs and those who are left out in the competition become the unemployed. Therefore, efforts are needed to control population growth because someday natural resources will run out (Skousen, 2005). The results of this study are in accordance with previous research conducted by Syam & Wahab (2015) which showed that population growth had a positive and significant effect on the unemployment rate in Makassar City (Syam & Wahab, 2015). However, the results of this study are also different from previous research conducted by Zulfa (2016), which stated that population growth had a negative and insignificant effect on the unemployment rate in Lhokseumawe City (Zulfa, 2016).

Relationship between Unemployment Rate (Z) and Poverty (Y)

Based on the linear regression equation above, the result of the linear regression coefficient of the unemployment rate is a negative direction of -0.948 with a significance value of 0.000 which is less than the significance level of 0.05 or 5% as the probability standard used. So it tells that the unemployment rate has a negative and significant effect on poverty in East Java Province in 2017-2021. The results of this study show that when there is an increase in the unemployment rate by 1% which should increase poverty but actually reduce poverty by 0.948%. It can also be said that the results of this study are inversely proportional between independent variables and dependent variables. So it can be interpreted that not all unemployment is poor because unemployment itself has several definitions. For example, there are individuals who are looking for work, individuals who are preparing for an organization but not looking for a job because they feel they cannot find a new job path and individuals who are looking for work but have not yet found a job opportunity.

Minister of Education, Culture, Research, and Technology (MENDIKBUDRISTEK), Nadiem Anwar Makarim stated that in 2020 East Java province ranked first with the most university graduates in Indonesia, which was 227,694 thousand people. Yang means that
people in East Java are still able to finance the education of their family members up to the university level. So it can be said that the social welfare of the population in East Java can still be said to be very high (KEMENDIKBUD RI, 2021). This indicates that those who are unemployed may not necessarily also have low per capita income. In addition, this is also supported by indications that not all those who are unemployed are categorized as underprivileged or poor. Because those who are unemployed certainly still have the potential to be supported by people who have enough per capita income to support their family members (Zuhdiyaty & Kaluge, 2018). The results of this study are in accordance with previous research conducted by Padli (2021), which showed that the unemployment rate had a negative and significant effect on poverty in Districts/Municipalities in West Nusa Tenggara Province in 2009-2013 (Padli, 2021). However, the results of this study are also different from previous research conducted by Putra & Arka (2018), which stated that the unemployment rate had a positive and insignificant effect on poverty in districts / cities in Bali Province (Putra & Arka, 201:8).

Relationship between Population Growth (X) to Poverty (Y) through Unemployment Rate (Z)

Based on the results of data analysis of the effect of population growth on poverty through the level of unemployment shows that population growth does not have a significant effect on the unemployment rate and the level of unemployment does not have a significant effect on poverty. So it can be concluded that the study of population growth variables on poverty through unemployment rate as a mediating variable based on the indirect influence relationship of the sobel test results is a negative effect with an Unstandardized Coefficients B value of -0.213 and does not significantly or does not mediate the effect of population growth on poverty with an Unstandardized Coefficients S value Td. Error of 0.085 which is more than the significance level of 0.05 or 5% as the probability standard used. From the calculation results using the sobel test formula, it shows that ti<ntable, which is with a value of -2.506<1.96. In addition, from the results of online sobel tests using statistical calculators, a tvalue of -2.549 was obtained, it can be concluded that the indirect relationship between the influence of population growth on poverty through the increase in unemployment as an intervening variable there is no mediating influence.

The results of this study are in accordance with previous research conducted by Murtala (2017) which showed that population growth had no influence on poverty in Aceh Province. This means that it gives an indication that if the condition of human resources is getting better, every time there is an increase in population growth, the tendency to reduce the poverty rate is greater or it can be said that there is a non-directional relationship (Murtala, 2017). Then the results of this study are also in accordance with previous research conducted by Prasetya & Sumanto (2022), which stated that the unemployment rate did not have a significant effect on poverty in East Java Province in 2011-2020. This means that the community's ability to meet their needs and high graduation rates can indicate the ability to prosper their families even though they are not yet working or unemployed (Prasetya & Sumanto, 2022). Furthermore, related to the absence of a mediating effect of the unemployment rate as an intervening variable between the influence of population growth on poverty has also been in accordance with the results of research conducted by Alwi et al (2021), which shows that there is no mediating effect by the
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unemployment rate as an intervening variable between economic growth and education level on poverty in Jambi Province 2004-2018 (Alwi et al., 2021). Similarly, in accordance with the results of research conducted by Putri &; Yuliana (2023), which shows that there is no mediating effect by the unemployment rate as an intervening variable between economic growth and poverty rates in Probolinggo (Putri &; Yuliana, 2023).

CONCLUSION

Based on the result of research and the discussion above, it can be concluded that population growth affects poverty in 2017-2021 in East Java Province. This shows that population growth without being accompanied by advances in other developmental factors will not increase income and demand. Population growth affects the unemployment rate in 2017-2021 in East Java Province. This shows that the increasing population cannot be fully absorbed by companies that provide jobs. The unemployment rate has no effect on poverty in 2017-2021 in East Java Province. This shows that those who are unemployed do not necessarily have low per capita income and are categorized as underprivileged or poor. Because branda is still potential supported by family members who have sufficient per capita income. Population growth in poverty mediated by the unemployment rate is not indirectly related or there is no mediating effect.

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