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The Influence of Gross Regional Domestic Product (PDRB), Education Health, and Unemployment on The Poverty Rate in Regencies/Cities of East Nusa Tenggara Province

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ABSTRACT

This research aims to determine and analyze the influence of Gross Regional Domestic Product (PDRB), length of schooling (education), life expectancy (health), and unemployment rate on the poverty rate in regencies or cities of East Nusa Tenggara Province. The method used is panel data regression, combining time series data from 22 regencies/cities and cross-sectional data from 2011 to 2022. There are three models in panel data regression: Pooled Least Squares (PLS), Fixed Effects Model (FEM), and Random Effects Model (REM). Based on the Hausman test, the model used in this research is the Random Effects Model (REM). The results of the research show that simultaneously, PDRB, education, health, and unemployment significantly influence the poverty rate. Partially, the PDRB variable and life expectancy (health) have a negative effect, while unemployment has a positive effect on the poverty rate. However, the length of schooling variable (education) does not have an influence on the poverty rate.

Key Words: GRDP, Education, Health, Poverty, Panel Data Regression, Unemployment.

1. INTRODUCTION

Poverty is a complex and global issue in many countries, often serving as a central topic that sparks various debates (Marinda et al., 2017). Poverty is a parameter used to evaluate a country's progress in socio-economic development. According to BAPPENAS (National Development Planning Agency), poverty is a condition of deprivation caused by unavoidable circumstances. Poverty can lead to low living standards for the population, resulting in limitations in meeting daily needs (Ritonga & Tri, 2020).

Poverty is a global issue that can affect many countries, not just developing ones. In fact, several developed countries with high-quality human resources and adequate natural resources also experience poverty issues. For developing countries, poverty remains a significant challenge that needs to be eradicated, including Indonesia, which has a high poverty rate (Feriyanto et al., 2020). Therefore, Indonesia must continue to focus on efforts to reduce poverty rates.

Poverty in Indonesia is an important issue that requires attention. Despite a decrease in poverty rates, poverty levels in Indonesia remain relatively high. This is attributed to several factors, such as low living standards, inadequate quality of education and healthcare services, and an increase in unemployment without corresponding job creation and employment opportunities.

Figure 1 illustrates the poverty rate in East Nusa Tenggara Province from 2011 to 2022, showing a declining trend overall. Based on the graph, there was an increase in the poverty rate in 2015, reaching 22,61 percent. Subsequently, there was a decrease until 2020, followed by an increase in 2021 to 20.99 percent as a result of the coronavirus pandemic that was prevalent globally at that time. Although the poverty rate in East Nusa Tenggara Province tends to show a decrease, according to Figure 1, the poverty rate in the province each year still tends to be in the twenties and remains significantly above the national average poverty rate. This situation indicates that a large portion of the province's population still falls below the poverty line.

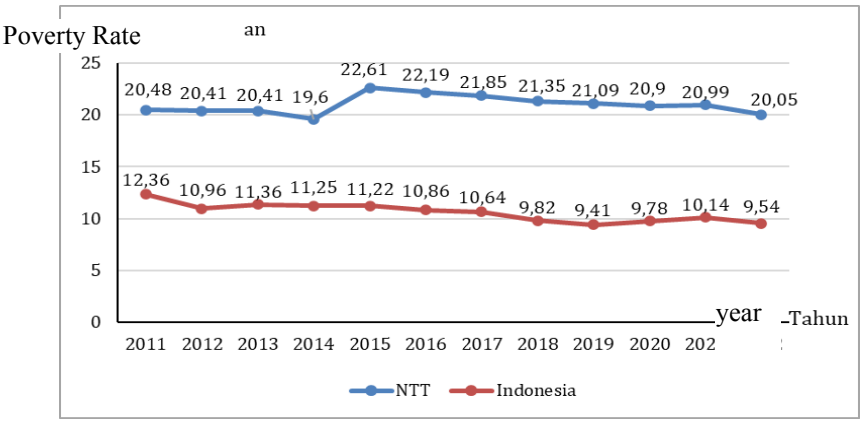

Figure 1
Poverty Rate in Indonesia and West Nusa Tenggara 2016-2022 (Percent)

The phenomenon of poverty remains a prevalent issue across all regions in Indonesia. Gross Regional Domestic Product (GDRP) reflects the level of economic productivity in a particular area. A rising GDRP indicates increased productivity in that region (Feriyanto et al., 2020). Therefore, the increasing GDRP plays a crucial role in reducing poverty rates in a region. The growth of GDRP in each province signifies the government's ability to improve the welfare of its people, leading to a decrease in poverty levels (Nabila, 2021). Sustained growth in GDRP can create more job opportunities and enhance community income.

One of the factors that can influence the poverty rate is education. Education plays a crucial role as a source of poverty alleviation in a country (Bukhari et al., 2021). Sanz, as cited in Nenik (2018), also argues that education has significant potential to affect the poverty rate. The lack of access to quality education leads to impoverished groups lacking the necessary skills to escape poverty (Eryong & Zhou, 2018). Another factor that can affect the poverty rate is health. Health is a basic need for all layers of society (Bintang & Woyati, 2018). Optimal health will increase community productivity and contribute to the increase in the workforce (Sudaryati et al., 2021). However, poor health or limited access to healthcare services can lead to poverty or worsen existing conditions. When the poor fall ill, the entire family can be trapped in a cycle of declining income and high healthcare costs (WHO, 2003).

Another factor that also influences the poverty rate is unemployment. Unemployment acts as a barrier to economic development in all regions because the unemployed do not contribute to economic activities (Feriyanto et al., 2020). One of the main causes leading to a surge in poverty is unemployment (Mansi et al., 2020). Unemployment can occur if the availability of labor is not followed by adequate employment opportunities, which can result in an increase in the unemployment rate (Muryani, 2018). Unemployment can occur when job opportunities do not increase, but there is an addition of new workforce every year (Nabila, 2021). In addition to encouraging job creation, increasing labor productivity is also needed (Muryani et al, 2021). According to Sukirno, as cited in Azizah et al. (2018), unemployment leads to a decrease in people's income, which can result in a decline in the welfare level of the community. When someone is unemployed, it means they lose their income from their job. Without a source of income, individuals may struggle to meet their needs (Alhudori, 2017). This can lead to an increase in poverty among those who were previously on the brink of poverty.

Fundamentally, education, unemployment, and health are interconnected and mutually influence each other. Improving the quality of education can contribute to reducing the unemployment rate and increasing job opportunities. This will affect the income received, ultimately reducing the poverty rate. Good health is also essential for increasing productivity and quality of life, which can help break the cycle of poverty. Another factor influencing poverty is Gross Regional Domestic Product (GRDP). A high GRDP in a region plays a role in reducing the poverty rate.

Poverty is a crucial issue that must continue to be addressed and resolved, especially by the local government of East Nusa Tenggara Province. East Nusa Tenggara Province ranks as the third poorest province in Indonesia, with poverty rates surpassing the national average. Poverty can be influenced by various factors, including Gross Regional Domestic Product (GRDP), education, health, and unemployment. Therefore, research and analysis on the influence of GRDP, education, health, and unemployment on the poverty rate in the regencies/cities of East Nusa Tenggara Province are needed.

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2. THEORY

The classical and neo-classical paradigms suggest that poverty originates from individuals or society itself. The imbalance between supply and demand caused by the limited role of the government can lead to increases in the prices of goods and inflation. A minimal government role can also have a negative impact on the development of the education, health, and job opportunities sectors, which are factors that can cause poverty (Davis & Martinez, 2014). The neo-liberal paradigm emphasizes the importance of reducing poverty rates in society, with one of the government's roles being through policy implementation. Government policies include expenditure on education, health improvement, and the provision of adequate facilities to create a good human resource base. Improving the quality of human resources can reduce poverty rates (Davis & Martinez, 2014).

Based on the definition provided by the Badan Pusat Statistik (BPS), poverty is the economic inability of individuals to meet their minimum needs. BPS measures the poverty level of a population according to the poverty line. The poverty line is equivalent to the minimum expenditure of 2,100 kilocalories for food per day. BPS defines poverty as the minimum expenditure to meet basic living needs in rupiah, both for food and non-food items, over a month (BPS, 2023). According to Bappenas, as cited in Marinda et al. (2017), poverty is a condition of deprivation due to unavoidable circumstances. Poverty is not only related to the consumption level or income of the population but also to the lack of access to services and infrastructure, such as education, healthcare, and clean water.

The Central Statistics Agency uses population calculations employing a basic needs approach. According to this approach, poverty is characterized by an individual's inability to economically meet both food and non-food needs. Therefore, someone is considered poor when their per capita income falls below the poverty line (BPS, 2023). The Head Count Index (HCI-P0) approach is utilized in this research. This method uses the percentage of the population living below the poverty line (GK). This calculation serves as the basis for determining the poverty rate or the percentage of the population living in poverty:

$$P_\alpha = \frac{1}{n}\sum_{i=1}^{q}\left[\frac{z - yi}{z}\right]^\alpha$$

Explanation:
z: poverty line
q: number of people below the poverty line
yi: average monthly per capita expenditure of individuals below the poverty line (i: 1,2,3,4,…q), where yi < z
n: total population
α: 0

A theory that can explain poverty is the theory of the poverty cycle. The poverty cycle (vicious circle of poverty) is a concept that describes a condition in which individuals or families are trapped in poverty and struggle to escape from it. Ragnar Nurkse first introduced the theory of the vicious circle of poverty in 1953. This theory highlights the perpetuation of poverty from one generation to the next. Underdevelopment, imperfect markets, and lack of capital are primary factors in the formation of the poverty cycle. As a result, it can create a situation where a country is trapped in poverty and faces challenges in achieving higher levels of development (Utami & Masjkuri, 2018).

Figure 2 illustrates that one aspect will influence another. Based on the figure, it can be interpreted that poverty occurs due to the underdevelopment of human resources, imperfect markets, and lack of capital, resulting in low productivity. Low productivity leads to low income. Low community income as a result of low productivity leads to low savings and investment. Low investment can then lead to underdevelopment, forming an interconnected vicious circle of poverty.

Poverty is closely related to Gross Regional Domestic Product (GRDP). GRDP is a measure used to assess the economic condition of a region over a specific period using constant and current prices. According to Todaro (Nabila, 2021), GRDP refers to the total value of all final output produced by the economy of a region. An increase in GRDP implies significant economic growth and indicates the success of the regional economy.

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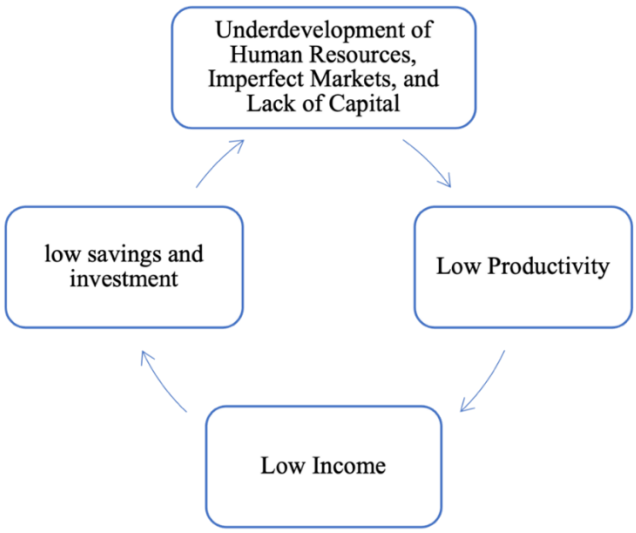

Figure 2 Vicious Circle of Poverty
Source: Nurkse in Agustina et al. (2018, adapted).

The Production Theory is a series of processes that utilize inputs to produce outputs that can fulfill societal needs. The production function depicts the relationship between inputs and outputs in production (Pindyck and Rubinfeld, 2009). The production function in an industrial firm conceptually relates to the firm's ability to apply optimal value in the industry. The production function sets the upper limit possible on the output that a firm can obtain with a certain combination of factors under certain technical knowledge conditions during the production period. Below is the mathematical equation of the production function as presented by Nicholson and Snyder (2012):

$$Y = f(K,L,M,E)$$

Where Y represents output, K represents capital, L represents labor, M represents materials, and E represents energy. The most widely used production function is the Cobb-Douglas production function, first proposed by Cobb and Douglas. The general form of the Cobb-Douglas production function is as follows:

$$Y = A \,.\, L^{\beta 1}.K^{\beta 2}.\ M^{\beta 3}.E^{\beta 4}$$

$$\ln Y_{it} = \alpha_0 + \beta_1 lnK_{it} + \beta_2 lnL_{it} + \beta_3 lnM_{it} + \beta_4 lnE_{it}$$

The theory of production illustrates how the combination of production factors, such as labor, capital, land, and entrepreneurship, contributes to the output or results produced in an economy. Although production theory does not directly address poverty issues, understanding the production process and the factors influencing it can provide potential solutions to poverty.

Education and health are closely related to poverty. According to Jandhyala, Lucas, 1988; Mankiw et al., 1992; Romer, 1990; Schultz, 1961 (cited in Abaidoo, 2021) and Todaro (2000), human capital can be assessed through the dimensions of education and health and are considered the most important drivers for poverty alleviation, although there are other components of human capital. This means that the theory of human capital emphasizes the importance of education and health as key components of human capital formation and their impact on worker productivity and income, thereby reducing poverty. Training and education play a role as added value for each individual. This can be clarified by the idea that the higher the level of education and training they undergo, the more their skills and abilities will improve. Health is closely related to education. When someone pursues higher education but has poor health, it will not lead to an increase in productivity. Conversely, higher levels of education also have a positive impact on a person's health. When someone obtains good education and health, it ultimately reduces poverty.

Poverty and unemployment are interrelated. There are several theories regarding unemployment, such as classical theory and Keynesian theory. According to the classical theory, the mechanism of free markets can be used to solve the problem of unemployment. The classical theory emphasizes labor force participation in the free market on the labor supply side. The availability of labor in the free market automatically generates demand for labor. This can

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lead to a balance between supply and demand. Then, all supplies will be absorbed by market demand. Keynesian theory views unemployment as arising from low aggregate demand, which can result in slow economic growth. The Keynesian theory states that the main impediment to economic growth is not due to low production but rather due to low consumption levels. According to Keynes in (Setyawan et al., 2021), the mechanism of free markets cannot solve this problem as recommended by classical theory. In Keynesian theory, unemployment can be addressed through government intervention.

The Relationship between Gross Regional Domestic Product (GRDP) and Poverty

According to Hadi Sasana in (Hasibuan, 2022), Gross Regional Domestic Product (GRDP) is a factor that can reduce poverty in a region. If the GRDP of a region is high, it reflects an increase in job opportunities and greater economic opportunities, resulting in an overall increase in the income of the population (Nabila, 2021). The increase in income means a reduction in the poverty rate. However, a high GRDP does not always mean that all residents in a region have high incomes due to uneven income distribution in that area.

The Relationship Between Education and Poverty

According to UNESCO in (Majumder & Soma, 2017), education is crucial in reducing poverty and enhancing the prosperity of a nation. Education is a necessity for all segments of society (Efendi et al., 2019). According to Simmons, education is a means to break free from the cycle of poverty. Liu et al. in (Ifa & Firdaus, 2023) state that education significantly reduces the poverty rate, and the role of education is also significant in alleviating poverty. Education is important in reducing poverty and enhancing the prosperity of a nation. The risk of poverty tends to occur among people with lower levels of education compared to those with higher education, thus efforts are needed to improve the quality of education and ensure equal access to education.

The Relationship between Health and Poverty

Poverty and health are closely interrelated (Batalipu et al., 2021). Individuals living below the poverty line are vulnerable to diseases. Todaro & Smith (2014) argue that if someone is susceptible to illness, it can affect their opportunities to earn higher income. Essentially, health plays a crucial role in determining an individual's standard of living. Relatively good health is vital in supporting all aspects of life activities (Ifa & Firdaus, 2023). According to Lincoln in (Salsabil & Westi, 2018), government actions to improve health play a crucial role as policy instruments in alleviating poverty. The underlying principle of this policy is that good health contributes to increased productivity of individuals in the impoverished group. Improving health will enhance work capacity, reduce absenteeism, and increase production output, which can help people escape poverty.

The Relationship between Unemployment and Poverty

Unemployment and poverty are closely intertwined, as having a steady job leads to prosperity, whereas unemployment can lead to poverty. According to Sukirno in (Marinda et al., 2017), unemployment inherently reduces the prosperity of society, leading to increased poverty levels. Additionally, a high level of unemployment reflects a lack of job opportunities in a region. Individuals struggling to find employment face a greater risk of poverty because they lack stable income (Mansi et al, 2020). Poverty cannot be separated from high unemployment rates. Unemployment has detrimental effects, such as reducing an individual's well-being due to a decrease in income (Geovanni, 2018). The decline in societal well-being due to lack of income provides opportunities for increased poverty (Mardiyana & Ani, 2019).

3.RESEARCH METHODS

3.1 Scope of Research

This research utilizes a quantitative approach, which is employed for numerical data and analytical techniques to measure a phenomenon. This approach is used to determine the influence of Gross Regional Domestic Product (GRDP), education (length of schooling expectancy), health (life expectancy), and unemployment on the poverty level in the East Nusa Tenggara Province. The research is based on secondary data obtained from publications by the Central Statistics Agency (Badan Pusat Statistik) of East Nusa Tenggara Province from 2011 to 2022. The data used

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include the percentage of the population living in poverty, PDRB based on constant prices in 2010, Length of Schooling Expectancy, Life Expectancy, and the open unemployment rate. This study covers 22 districts or cities in East Nusa Tenggara Province over a twelve-year period from 2011 to 2022. The data period used in this research is from 2011 to 2022.

Operational Description of Variables

Poverty Level Variable

According to the Badan Pusat Statistik (2023), poverty is defined as the percentage of the population living below the Poverty Line (GK) measured in percentage (%). The poverty rate in this study is assessed using the percentage of the population living in poverty, measured in percentage (%).

Gross Regional Domestic Product (GRDP) Variable

In this research, the variable Gross Regional Domestic Product (GRDP) is used based on constant prices of the year 2010, measured in billion rupiah. Subsequently, it is transformed into natural logarithm form. GRDP represents the total value of final goods and services produced by all economic units in a region (BPS, 2023). This approach is employed to assess the economic growth from year to year.

Education Variable

In this study, the education indicator is measured using the Expected Years of Schooling (EYS), expressed in years. Expected Years of Schooling represent the total number of years of schooling that a child is expected to complete by a certain age in the future (BPS, 2023).

Health Variable

In this study, the health indicator used is life expectancy at birth, measured in average estimated years that an individual is expected to live from birth, expressed in years (BPS, 2023).

Unemployment Variable

In this study, the indicator for unemployment utilizes the open unemployment rate, measured in percentage, which represents the proportion of the population without a job and actively seeking employment (BPS, 2023).

Model of Research

This research employs a panel data regression analysis to investigate the influence of each variable and to determine the best model, conducted through three tests including the Chow Test, the Hausman Test, and the Lagrange Multiplier Test. The dependent variable used is the poverty rate, while the independent variables include Gross Regional Domestic Product (GRDP), Expected Years of Schooling (EYS), Life Expectancy, and the Open Unemployment Rate. This study also encompasses Classical Assumption Tests (Multicollinearity Test, Autocorrelation Test, Heteroskedasticity Test) and Statistical Tests (t-statistic Test, F-statistic Test, Coefficient of Determination). The empirical model utilized refers to the research by Bintang & Woyanti (2018), as follows:

$$TKit = \beta 0 + \beta 1 lnPDRBit + \beta 2 HLSit + \beta 3 AHHit + \beta 4 TPTit + eit$$

Explanation:

TK : Poverty Rate
β0 : Constant
PDRB : Gross Regional Domestic Product
HLS : Expected Years of Schooling
AHH : Life Expectancy
TPT : Open Unemployment Rate
E : Error term
Ln : Natural Logarithm

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β1 – β4: Coefficients
i : Cross Section, representing the 22 districts/cities in East Nusa Tenggara Province
t : Time Series, covering the years 2011 to 2022

4. RESEARCH RESULTS

4.1 Descriptive Statistics of Variables

Descriptive statistical analysis aims to provide a general overview of the dependent and independent variables used in the study. Table 1 shows that each variable has a mean value greater than the standard deviation. This result indicates a low data dispersion or evenly distributed values. The data in Table 1 are presented in their original numeric form before being transformed into natural logarithms.

Table 1 Descriptive Statistics

Variabel	Notasi	n	Mean	Std. Dev.	Max	Min
Poverty Rate	TK	264	21,69	7,37	39,49	7,83
GRDP	PDRB	264	2844,11	2758,21	17138,22	550,54
Expected Years of Schooling	HLS	264	12,40	1,20	16,43	9,58
Life Expectancy	AHH	264	65,38	2,42	70,11	57,19
Open Unemployment Rate	TPT	264	3,29	2,16	15,75	0,25

Source: STATA 17, data processed

The variable poverty rate shows a minimum value of 7,83, indicating the lowest poverty rate at 7,83 percent. The maximum value is 39,49, indicating the highest poverty rate at 39,49 percent. The standard deviation is 7,37, and the mean is 21,69.

The variable Gross Regional Domestic Product has a minimum value of 550,54, indicating the lowest GRDP at 550,54. The maximum value is 17138,22, indicating the highest GRDP at 17138.22. The standard deviation is 2758,21, and the mean is 2844,11.

The variable Expected Years of Schooling shows a minimum value of 9,58, indicating the lowest years of schooling expectancy at 9,58 years. The maximum value is 16,43, indicating the highest years of schooling expectancy at 16,43 years. The standard deviation is 1,20, and the mean is 12,40.

The variable Life Expectancy shows a minimum value of 57,19, indicating the lowest life expectancy at 57,19 years. The maximum value is 70,11, indicating the highest life expectancy at 70.11 years. The standard deviation is 2,16, and the mean is 3,29.

The variable Open Unemployment Rate shows a minimum value of 0,25, indicating the lowest open unemployment rate at 0,25. The maximum value is 15,75, indicating the highest open unemployment rate at 15,75. The standard deviation is 2,16, and the mean is 3,29.

Model Selection Analysis

There are three models that can be used for panel data regression analysis, namely the Common Effect Model, Fixed Effect Model, and Random Effect Model. To determine the most appropriate model for estimating panel data regression, three tests are commonly used: the Chow Test, the Hausman Test, and the Lagrange Multiplier (LM) Test. Based on the three tests conducted, the best model selected for analyzing the impact of GRDP, Education, Health, and

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Unemployment on the Poverty Rate in the Districts/Cities of East Nusa Tenggara Province is the Random Effect Model (REM) compared to the Common Effect Model (CEM) and Fixed Effect Model (FEM).

Table 2
Model Selection Analysis

Test	Prob	Decision
Chow	0.0000	Fixed Effect Model (FEM)
Hausman	0.0928	Random Effect Model (CEM)
Lagrange Multiplier	0.0000	Random Effect Model (FEM)

Classical Assumption Test
Multicollinearity Test

Table 3
Multicollinearity Test

Variable	VIF	1/VIF
lnPDRB	1,59	0,551648
HLS	1,39	0,718562
AHH	1,11	0,903915
TPT	1,81	0,551648
Mean VIF	1,48	

Source: STATA 17, data processed

Based on Table 3, the coefficient values of VIF for each variable are greater than 10, indicating that the VIF values are not less than 10. If the coefficient value of VIF is less than 10, then the null hypothesis (H0) is rejected, indicating that the model does not suffer from multicollinearity issues.

Autocorrelation

Table 4
Autocorrelation Test

Durbin-Watson Statistic	1,845026

Source: STATA 17, data processed

Based on Table 4, the result of the autocorrelation test shows a value of 1.845. This value falls within the range of -2 to +2. Therefore, it indicates that all variables in this study do not suffer from autocorrelation issues.

Heteroscedasticity Test

Table 5
Heteroscedasticity Test

chi-square	0,10
Prob *chi-square*	0,7517

Source: STATA 17, data processed

Based on Table 5, the probability value of the chi-square test is greater than α (5%), indicating that H0 is rejected. Therefore, it suggests that the regression results obtained do not exhibit heteroskedasticity issues.

Statistical Test
T-statistic Test (Partial)
The statistical test is used to observe the partial influence of independent variables on the dependent variable. The t-statistic test is conducted by comparing the probability values of each independent variable with the significance level (α). Table 6 shows the probability values in the REM estimation model for each independent variable as follows:

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1. The variable lnPDRB has a probability value of 0.031 < 0.05 (α), indicating that the PDRB variable has a significant influence on the poverty rate variable.
2. The variable expected years of schooling has a probability value of 0.224 > 0.05 (α), indicating that at a significance level of 0.05, the expected years of schooling variable has an insignificant influence on the poverty rate variable.
3. The variable life expectancy has a probability value of 0.042 < 0.05 (α), indicating a significant influence of the health variable on the poverty rate variable
4. At a significance level of 5%, the variable open unemployment rate has a probability value of 0.003 > 0.05 (α). This indicates that the open unemployment rate variable significantly influences the poverty rate variable.

Test F-Statistics (Simultaneous)

The simultaneous effect of independent variables on the dependent variable can be observed through the F-statistic test. The estimation results in Table 6 show that the probability value of the F-statistic is 0.0136. This probability value is significant at the 5% significance level, indicated by the F-statistic value being less than α or 0.0136 < 0.05. This means that the independent variables in the model (PDRB, education, health, and unemployment) collectively have an influence on the dependent variable (poverty rate).

ESTIMATION RESULTS

Table 6 shows the estimation results of the panel data regression. The independent variables including PDRB and health (life expectancy) exhibit significant and negative effects on the dependent variable, which is the poverty rate. The open unemployment rate has a significant and positive impact on the poverty rate. However, the education variable (years of schooling) does not have any effect on the poverty rate.

Table 6
Random Effect Model (REM) Estimation Results

	Dependent variable: Poverty Rate			
	Coefficient	**Standard Error**	**Statistik-t**	**Probability**
Cons	40,64671	7,230227	5,62	0,000
LnGDRP	-2,295482	1,067107	-2,15	0,031
Expected Years of Schooling	0,0778631	0,0639941	1,22	0,224
Life Expectancy	-0,1304053	0,1863289	-2,03	0,042
Open Unemployment Rate	0,563275	0,1512	3,02	0,003
Observation (n)	264		Wald chi2	12.56
R-squared	0,6825		Prob Chi2	0.0136

Source: STATA 17, data processed

Based on the regression results of the Random Effect Model (REM), it is evident that the independent variables (GDRP, education, health, and unemployment) collectively have an impact on the poverty rate. Partially, the variables GDRP, education, health, and unemployment significantly affect the poverty rate. However, the education variable does not have any influence on the poverty rate.

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DISCUSSION

Impact of Regional Gross Domestic Product (GDRP), Education, Health, and Unemployment on Poverty Rate Simultaneously

Based on Table 6, the estimation results from the REM show a Prob F value of 0.000, indicating that the variables GDRP, education, health, and unemployment collectively have a significant impact on the poverty rate. In this estimation result, the obtained R-Squared value is 0.6825. This result indicates that the model can explain the relationship between the independent variables and the dependent variable by 68.25 percent, while 31.75 percent is explained by variables outside the model.

Impact of Regional Gross Domestic Product (GDRP) on the Poverty Rate

The estimation results indicate that GDRP has a significant and negative impact on the poverty rate in the East Nusa Tenggara Province from 2011 to 2022. This means that the higher the PDRB of an area, the lower the poverty rate. The coefficient of the PDRB variable is -2.30, which means that when GDRP increases by one percent, the poverty rate will decrease by 0.023 percent, assuming other variables are constant.

The findings of this study are consistent with previous research conducted by Marinda et al. (2017), Wati & Arief (2019), Geovanni (2018), Ritonga & Tri (2020), Andrietya et al. (2020), and Hasibuan (2022) which state that the GDRP variable has a negative impact on the poverty rate. When the PDRB of an area increases significantly, it indicates increased economic activity and job opportunities. The increase in GDRP can reduce the poverty rate because it creates more job opportunities for the community and generates higher income. The findings of this study also align with Nurkse's poverty theory, which states that poverty can be alleviated by increasing regional economic income and investment activities in both physical and non-physical fields.

This study contradicts the findings of research conducted by Hanafi (2020) and Sari (2018), which state that GDRP can increase the poverty rate. This can happen when every sector that drives regional economy has not been able to synergize well. Only a few sectors may develop while others still lag behind or are underdeveloped compared to other sectors.

Impact of Education (Years of Schooling) on Poverty Rate

The estimation results indicate that years of schooling (education) do not have a significant impact on the poverty rate in East Nusa Tenggara Province from 2011 to 2022. This finding is consistent with the research conducted by Tooki (2022), which found that years of schooling have a positive but not significant effect on the poverty rate. Based on these results, it can be concluded that years of schooling do not influence the poverty rate. This may occur because even though someone may attend school for a longer period, the quality of education they receive may not be adequate in equipping them with the skills and knowledge needed to escape poverty. Poor education quality may not effectively enhance an individual's work skills or income potential.

Impact of Health (Life Expectancy) on Poverty Rate

The estimation results show that life expectancy has a significant and negative impact on the poverty rate in East Nusa Tenggara Province from 2011 to 2022. This indicates that an increase in life expectancy will decrease the poverty rate. The coefficient of the life expectancy variable is -0.13, meaning that when life expectancy (health) increases by one year, the poverty rate will decrease by 0.13 percent, assuming other variables are constant.

These findings are consistent with the research by Efendi (2019), Kevin et al (2022), Bintang & Woyanti (2018), Sudaryati et al (2021), Firdaus et al (2021), and Batalipu et al (2021), which state that life expectancy (health) has a significant and negative impact on the poverty rate. Low life expectancy in an area indicates the failure of health development efforts undertaken by the government. According to Anggadini (Firdaus et al, 2021), increasing life expectancy indicates the success of health development efforts, which will impact an individual's ability to produce over a longer period. The increase in production capacity will lead to an increase in both goods and services offered to consumers, thereby increasing per capita income. Generally, an increase in per capita income tends to reduce the percentage of the population living in poverty as a result of increased consumer spending.

These research findings are also consistent with human capital theory, which states that health contributes to increasing an individual's productivity, leading to a decrease in poverty rates. Health affects poverty because it is a

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prerequisite for increasing individual productivity (Ifa & Firdaus, 2023). Productivity and community income can increase if individuals are in good health, which ultimately can reduce poverty rates. Additionally, according to Arsyad (Sudaryati et al, 2021), improved health can also increase labor force participation, reduce absenteeism, and increase productivity.

Impact of Open Unemployment Rate on Poverty Rate

The estimation results show that the open unemployment rate has a significant and positive impact on the poverty rate in East Nusa Tenggara Province from 2011 to 2022. This indicates that when the open unemployment rate increases, the poverty rate also increases. The coefficient value of the open unemployment rate variable is 0.56, meaning that when the open unemployment rate increases by one percent, the poverty rate will increase by 0.56 percent, assuming other variables are constant.

These findings are consistent with research conducted by Mardiyana (2019), Kurniawan (2018), Agustina et al (2018), Bintang & Woyanti (2018), and Alhudori (2017), Mansi et al (2020), which state that higher unemployment rates lead to higher poverty rates. This occurs because individuals without jobs do not earn enough income to meet their living expenses due to a lack of job opportunities. A higher unemployment rate can also reflect the economic conditions of an area. A higher unemployment rate in an area may indicate poor economic conditions in that area. The link between unemployment and poverty shows a positive relationship because high unemployment rates lead to suboptimal income and welfare levels for the community, contributing to higher poverty rates (Mardiyana & Ani, 2019).

These research results are inconsistent with research conducted by Lismana & Hadi (2022), Geovanni (2018), and Andrietya et al (2020), which found that the open unemployment rate does not have an impact on the poverty rate. This can occur when there are individuals who do not work in a household, but there are other household members who work with high income levels that are sufficient to support the unemployed. In relation to poverty, unemployed individuals in these households do not automatically become poor because there are other family members with sufficient income to keep the family above the poverty line. Additionally, there are individuals who refuse jobs because they do not match their skills, so they use those skills to help them overcome financial problems.

5. CONCLUSION

Based on the analysis and discussion, it can be concluded that, partially, Gross Regional Domestic Product (GRDP) and health have a negative impact, while unemployment has a positive impact on poverty in the districts or cities of East Nusa Tenggara Province. However, the education variable does not have an influence on the poverty rate in the districts or cities of East Nusa Tenggara Province. The analysis results indicate that collectively (simultaneously), GRDP, education, health, and unemployment significantly affect the poverty rate in the districts or cities of East Nusa Tenggara Province from 2011 to 2022.

Based on these conclusions, the following recommendations can be provided for the government:

1. The government should provide technical assistance, training, and market access to help local entrepreneurs increase production and competitiveness for the development of potential local economic sectors such as agriculture, fisheries, tourism, and handicrafts.
2. The government should launch scholarship programs and provide financial assistance for education to poor families to encourage greater school participation and increase the number of schools and educators in areas with low education levels
3. The government should provide incentives for medical personnel to work in rural areas, provide subsidy programs or health insurance for poor families, and provide routine and free vaccination programs.
4. For future researchers who will use similar research topics, they can include other variables that may affect the poverty rate.

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