



The effect of unemployment and economic growth on poverty in West Sumatra Province

Hendri Andika Saputra^{1*}, Dastanta Irvan Ginting², Sukardi³, Ahmad Albar Tanjung⁴
^{1,2,3,4} Faculty of Economics and Business, Universitas Sumatera Utara, Medan, Indonesia

ARTICLE INFO

Article history:

Received Oct 29, 2023
 Revised Nov 11, 2023
 Accepted Nov 12, 2023

Keywords:

Economic Growth;
 Poverty;
 Unemployment.

ABSTRACT

Poverty is a global issue faced by countries worldwide, defined as the inability to attain minimum living standards. This research aims to explore the impact of unemployment and economic growth on poverty in the province of West Sumatra. The study employs the Error Correction Model (ECM) approach. The analysis reveals that the unemployment variable has a positive and significant influence on the unemployment rate in both the short and long term. Additionally, the economic growth variable has a positive and significant impact on poverty in the long term. These findings shed light on the intricate dynamics between unemployment, economic growth, and poverty in West Sumatra, providing valuable insights for policymakers striving to develop effective and sustainable strategies to address poverty in the region.

This is an open access article under the [CC BY-NC](https://creativecommons.org/licenses/by-nc/4.0/) license.



Corresponding Author:

Hendri Andika Saputra,
 Faculty of Economics and Business,
 Universitas Sumatera Utara,
 Jl. Dr. T. Mansur No.9, Padang Bulan, Kec. Medan Baru, Kota Medan, Sumatera Utara 20222, Indonesia
 Email: hendri.as49@gmail.com

1. INTRODUCTION

The Indonesian government realizes that national development is an important step towards realizing a just and prosperous society. To achieve this goal, various development efforts are focused on regional development, especially areas that are still underdeveloped. Regional development is carried out holistically and sustainably, in accordance with the unique priorities and needs of each region. National development goals and targets are determined through long-term and short-term plans. (Pengaruh & Pengangguran, 2005)

(Kemiskinan et al., n.d.) In an effort to reduce the number of poor people, primary growth must be supported by appropriate development strategies and instruments. Therefore, one of the main criteria in selecting leading sectors for national development is effectiveness in reducing poverty. Poverty is a global challenge faced by all countries, defined as the inability to achieve a minimum standard of living.

In March 2023, the number of poor people reached 25.90 million people, a decrease of 0.46 million people compared to September 2022. In total, from March 2021 to March 2023, there were 1.6 million people who managed to get out of the poverty line. From a geographical perspective, the poverty rate in March 2023 will decrease in both urban and rural areas. This decline is in line with increasing economic activity, decreasing unemployment rates, and improving inflation control. (Nadya & Syafri, 2019a)

The government continues to maintain its commitment to accelerate economic growth, create wider job opportunities, and maintain inflation stability in order to accelerate the reduction of poverty levels to below pre-pandemic levels.

(Novriansyah, n.d.) Poverty is a serious challenge in many countries, especially in developing countries. Poverty describes a situation where a person is unable to fulfill his basic needs, such as

food, clothing, medicine, and shelter. The success of a regional government's development is often assessed by measuring social and economic conditions, which can be reflected in the existing poverty level.

West Sumatra Province has the eighth level of poverty compared to provinces on the island of Sumatra (BPS Indonesia, 2021). However, overall the per capita food poverty line in West Sumatra province is IDR 495.82 thousand per capita per month in 2022. This figure is an increase of IDR 32,914 compared to the previous semester's data which was recorded at IDR 462.91 thousand per capita per month.

According to the National Team for the Acceleration of Poverty Reduction (TNP2K), the extreme poverty rate in West Sumatra will fall by 0.14 percent in 2022. Down from 0.91 percent (50.84 thousand) in 2021, to 0.77 percent (43.67 thousand) in 2022. This decline figure is the third highest in Sumatra, along with Jambi Province. Nationally, West Sumatra is also one of 20 provinces that has experienced a reduction in extreme poverty.

This decline cannot be separated from the consistency of the West Sumatra Provincial Government in implementing various superior programs for empowerment in various fields, such as entrepreneurship, agriculture and tourism. For urban areas, for example, the West Sumatra Provincial Government is intensifying the 100 thousand entrepreneur program. For rural areas, explained Medi, this is an integrated program in the agricultural sector in a broad sense, namely plantations, fisheries/maritime affairs, forestry (social forestry), animal husbandry and horticultural agriculture. Then comes from tourism activities. By increasing the number of events so that visits increase and economic transactions occur and increase people's income. (Sirait, n.d.)

Poverty is caused by several factors, including inadequate minimum wages, poor people's living standards, and increasing unemployment rates every year without additional job opportunities. Todaro & Stephen C (2014) explained that the minimum wage was created with the aim of increasing workers' welfare and thereby reducing poverty. The standard of living of society is described through the increasing quality of knowledge, skills and talents. Economic growth will realize community welfare through various social development and economic development in overcoming the problem of poverty. The limited number of jobs available is the main cause of unemployment and has a direct impact on high levels of poverty. (Ernita, 2023)

Economic indicators that influence poverty levels can be caused by unemployment, which is a situation where someone who is in the workforce wants to get a job but has not been able to get it. People who are not working, but are not actively looking for work are not classified as unemployed. Thus, it can be concluded that unemployment is a number of people or a number of residents who are included in the workforce whose productive age has reached 15-64 years, whether they already have a job but are temporarily unemployed or those who are looking for work, they are classified as unemployed. (Nadya & Syafri, 2019b)

In a country, the unemployment situation is very bad, unemployment will have an adverse effect on social welfare and economic development in the long term. In fact, the problem of unemployment is a problem that has a very bad effect on the economy and society, and therefore continuous efforts must be made to overcome it.

The next factor that triggers poverty is the problem of economic growth. Economic growth refers to the development of economic activity that causes an increase in the production of goods and services in society. Economic growth is a macroeconomic aspect related to the long term. From one period to the next, a country's ability to produce goods and services increases. This increase was caused by increases in both the quantity and quality of production factors. Apart from that, population growth also contributes because increasing labor, work experience, and increasing educational qualifications improve people's skills. (Pengaruh PDRB et al., 2018)

Even though production potential increases, the actual growth in production of goods and services is not always commensurate. The potential increase in production is often greater than the actual increase in production. Therefore, economic development is often slower than its potential. A continuous increase in a country's economic growth indicates economic improvement, while a decline or stagnation indicates an inability to experience good progress. This condition can result in various problems, with poverty being one of the worst impacts in the context of a country's economy.

(Sabrina & Suhartono, 2023) Poverty is a problem faced by all countries in the world, defined as the inability to achieve a minimum standard of living. There are two perspectives in understanding poverty: First, absolute poverty, where this approach determines the number of people living below a certain poverty threshold. Second, relative poverty, which involves the distribution of national income among various income groups. In other words, relative poverty is closely related to the issue of income distribution

The consumption-based poverty line consists of two elements, namely: (1) expenditure required to purchase minimum nutritional standards and other basic needs, and (2) varying amounts of needs that reflect the costs of participation in daily life. The first part is relatively clear, with the costs of meeting basic needs calculated based on the prices of food generally consumed by the poor. Meanwhile, the second element is more subjective, involving various costs for participating in community life. (Azulaidin & Si, 2021)

There are several causes of poverty, first, poverty can arise due to inequality in resource ownership which results in unequal income distribution. Poor people often have limited and low-quality resources. Second, inequality in the quality of human resources, such as low levels of education, disadvantage, discrimination, or hereditary factors, can be a cause of poverty. Third, differences in access to capital can also cause poverty.

These three causes of poverty lead to the concept of a vicious circle of poverty, where underdevelopment, market imperfections and lack of capital lead to low productivity. Low productivity results in low income, which in turn results in low savings and investment. Low investment then worsens economic backwardness. A prominent development economist, Ragnar Nurkse, stated that "a country is poor because it is poor." (Ekonomi et al., n.d.)

Developing countries currently still face difficulties in managing their domestic markets to become more competitive markets. Inability to manage economic development can result in capital shortages, decreased productivity, decreased real income, and low savings and investment. This forms a vicious cycle of poverty that continues to spin. Therefore, efforts to overcome poverty should be aimed at breaking the cycle and trap of poverty. (Mardiatillah et al., n.d.)

Economic growth is the long-term development of a country's capacity to supply various economic commodities to its citizens. A country's economic growth depends on three factors. The first is capital accumulation, which refers to all new investments made in real estate, machinery, and human resources. Second, the labor force will increase as a result of future population expansion. Third, technological advances in the form of new methods or improvements to conventional methods in carrying out a task. a job. Economic growth is an indicator to see economic performance, both at the national and regional (regional) levels. Basically, economic growth is an increase in aggregate output (all goods and services produced by economic activities) or Gross Domestic Product (GDP). GDP itself is the total value of all final output produced by an economy, both by local residents and foreign residents who live in the country concerned. Thus, the general measure that is often used to see the rate of economic growth is the percentage change in GDP on a national scale or the percentage change in GDP on a provincial or district/city scale. (Ratu Gandasari, 2016)

The following explains several factors that have long been considered by economists as important sources that can encourage economic growth, including (Sianturi et al., 2021) : (1). Land and Other Natural Resources, A country's natural wealth, such as land area and fertility, climate, marine products, and the presence of forests, play a key role in economic development. Lack of capital, experts and knowledge can be an obstacle to developing economic activities outside the agricultural and mining sectors. This factor is especially relevant in the early stages of economic growth. (2). Number and Quality of Population and Workforce, Population growth can be a driver or obstacle to economic development. Population growth can increase the number of workers and national production. However, if the increase in labor is not able to increase national production faster than population growth, per capita income can decrease, causing a decline in societal prosperity. (3). Capital Goods and Technology Level, Capital goods and the level of technology have an important role in increasing the efficiency of economic growth. Technological progress can increase production coefficients, reduce production costs, and increase production quantities. Without technological development, the productivity of capital goods will remain low. (4). Social System and Community Attitudes, Social systems and community attitudes have a key role in realizing economic

growth. Traditional customs and land ownership structures can be obstacles to the use of modern, high-productivity production methods. A social system that is not supportive and societal attitudes that are not progressive can hinder the acceleration of economic growth.

Unemployment refers to a situation where a person in the labor force desires to get a job but has not succeeded in doing so. Individuals who are not working and are not actively looking for work are not considered unemployed. Thus, it can be concluded that unemployment includes individuals in the workforce aged 15-64 years who are looking for work or who are temporarily unemployed despite previously having a job. (Soejoto & Karisma, n.d.)

The main factor causing unemployment is a lack of aggregate spending. High demand will result in increased production, which in turn will increase labor use. Therefore, there is a close relationship between the level of national income and the use of labor in the economy. The higher the national income, the greater the use of labor. The problem of unemployment is a major focus in many countries, and a number of economic experts recommend implementing economic policies to overcome this problem. Three forms of government policy that can be implemented include fiscal policy, monetary policy and supply policy. Based on this classification, unemployment can be divided into the following types: (Ramdhan et al., 2017)

Types of Unemployment Based on Causes: (a). Normal Or Frictional Unemployment; If the unemployment rate in an economy is around two or three percent of the workforce, then the economy is considered to have reached full employment. Unemployment of two or three percent is referred to as normal or frictional unemployment. In fast-growing economies, unemployment rates are low because jobs are easy to find, so job seekers who have just entered the job market are temporarily considered unemployed. They are included in the normal unemployment category. (b). Cyclical Unemployment, The economy is not always stable. Sometimes aggregate demand increases, prompting firms to increase production and employ more workers. When aggregate demand decreases, companies can reduce the number of workers or even close their businesses, so that the unemployment rate increases. This type of unemployment is called cyclical unemployment. (c). Structural Unemployment, Economic decline can be caused by various factors, such as the emergence of new, better products, technological advances that reduce demand for certain products, high and uncompetitive production costs, or a decline in exports due to fiercer competition from other countries. This decline can result in a decrease in production activities in certain industries, forcing some workers to be fired and become unemployed. Unemployment that arises as a result of structural changes is called structural unemployment. (d). Technological Unemployment, Unemployment can also be caused by the replacement of human labor by machines and chemicals. Unemployment that occurs due to the use of technology and machines is called technological unemployment.

Types of Unemployment Based on Their Characteristics (Astriani et al., 2021), Based on its characteristics, unemployment can be classified into four types: (a). Open unemployment, This type of unemployment occurs when the increase in job vacancies is lower than the increase in labor. Open unemployment can be caused by a decline in economic activity, technological advances that reduce the use of labor, or a setback in the development of an industry. (b). Hidden Unemployment, Hidden unemployment mainly occurs in the agricultural or service sectors. In many developing countries, there are often more workers in an economic activity than are actually needed to carry out that activity efficiently. The excess labor used is included in the category of hidden unemployment. (c). Seasonal Unemployment, Seasonal unemployment mainly occurs in the agricultural and fisheries sectors. When the weather is unfavorable, such as rain or bad weather conditions, workers in this sector cannot do other work, so they are forced to be unemployed. This kind of unemployment is called seasonal unemployment. (d). Half Unemployed, In developing countries, migration from villages to cities often occurs rapidly. However, not everyone who moves to the city can easily find work. Some of them are forced to become full-time unemployed. Workers who experience this situation are referred to as underemployed.

2. RESEARCH METHOD

The data used in this research are secondary time series data obtained from BPS and BI publications in the form of:

1. The dependent variable is poverty in West Sumatra Province
2. Independent Variable
 1. Unemployment Rate in West Sumatra
 2. Economic Growth in West Sumatra

(Dokumen, n.d.) This research uses an error correction model (ECM) approach which can overcome erroneous regression results. Fake regression occurs if the variables in the model are not related to each other, but the regression results show a significant regression coefficient and a high coefficient of determination value. Regression that produces a biased regression means there is a possibility of imbalance in the short term but there is balance in the long term.

Stationary Test

(Endah, 1990a) Some unit root tests include the Augmented Dickey Fuller (ADF) test or the Philip Peron (PP) test. In this study only the Augmented Dickey Fuller (ADF) test was used. This unit root test was first developed by Dickey Fuller. The results of the ADF test are greatly influenced by the lag, therefore the length of the lag of the ADF unit root test can be carried out using criteria from the Akaike Information Criterion (AIC) or the Schwartz Information Criterion (SIC) or other criteria. The steps used to see whether the data is stationary or not are by comparing the ADF statistical value with the ADF critical value. If the ADF value is greater than the critical value then the data is stationary and if the ADF value is smaller than the critical value then the data is not stationary. Data that is not stationary can be used as stationary data by means of a stationarity test at the level of data differentiation or a degree of integration test. This test is carried out to find out at what degree of integration the data is stationary.

Cointegration Test

The Cointegration Test was carried out to indicate the possibility of a long-term relationship between the economic variables used in the research. Data can be said to have a long-term relationship if the data is cointegrated at the same level. If the variables show cointegration then there is a relationship over a long period of time. On the other hand, if the variables do not show cointegration then there is no long-term relationship. One of the tests used to determine the cointegration of a number of variables is the test developed by Johansen. Whether there is cointegration or not is based on the likelihood ratio (LR) test. If the LR calculated value is greater than the LR critical value then there is cointegration of a number of variables. Conversely, if the LR calculated value is smaller than the critical value then there is no cointegration. Johansen also provides an alternative LR statistical test known as maximum eigenvalue statistics. If the trace statistic value > the critical value (at $\alpha = 1\%$, 5% , 10%) then there is cointegration between variables. On the other hand, if the trace statistic is < the critical value (at $\alpha = 1\%$, 5% , 10%) then there is no cointegration between variables. (Endah, 1990b)

Error Correction Model (ECM)

Time series data is often not stationary, causing doubtful regression results or what is known as erratic regression. An erratic regression is a situation where the regression results show significant regression coefficients that are not related to each other in the model. Error Correction Model (ECM) is an appropriate model for non-stationary time series data. Data that is not stationary often shows an imbalance relationship in the short term, but there is a tendency for an equilibrium relationship to occur in the long term. (Geovani Peoha et al., n.d.)

Classic Assumption Test

(Mutiarasari et al., n.d.) Classic Assumption Test This classic assumption test is carried out to detect whether there is autocorrelation, heteroscedasticity and normality problems. If there are deviations from classical assumptions, the tests carried out previously are considered invalid and could disrupt existing conclusions.

1. Heteroscedasticity Test Regression models with heteroscedasticity contain serious consequences for the Ordinary Least Square (OLS) method estimator because it is no longer the Best Linear Unbiased Estimator (BLUE). Therefore, it is very important to know whether a

- regression model contains elements of heteroscedasticity or not. This method for detecting heteroscedasticity problems has been developed by econometric experts
- The multicollinearity test is carried out to find out whether there is a correlation between the independent variables. For this test, you can look at the R-square value for each independent variable. If the R square value for the independent variable is smaller than the R-square in the results of the regression analysis, then there is no multicollinearity in the data on the independent variable. In this research, the method used is a correlation matrix so that the correlation between independent variables in one equation is known. To determine whether there are symptoms of multicollinearity, this can be done by calculating the correlation coefficient between independent variables.
 - Normality Test The normality test is used to determine whether in a regression model the dependent and independent variables or both have a normal distribution or not. A regression model is said to be good if the data distribution is normal or close to normal.(Darman, n.d.)

3. RESULTS AND DISCUSSIONS

Table 1. Unit Root Test (In Level)

Variable	ADF value	MacKinnon's critical value			Prob.	Information
		1%	5%	10%		
Unemployment	-2.128.120	-4.121.990	-3.144.920	-2.713.751	0.2381	Not Stasionary
Economic Growth	0.179703	-4.200.056	-3.175.352	-2.728.985	0.9565	Not Stasionary
Poverty	-3.044.273	-4.200.056	-3.175.352	-2.728.985	0.0614	Not Stasionary

Source: Eviews 10 Processed Data

Table 1 shows the results that all variables are not stationary because the ADF value is more positive than the critical value. As a consequence, the assumption of stationarity at zero degree is not met, so all variables will be tested by testing the degree of integration at the first difference level.

Table 2. Degree of Integration Test

Variable	ADF Value	MacKinnon's critical value			Prob.	Information
		1%	5%	10%		
Unemployment	-5.625.619	-4.200.056	-3.175.352	-2.728.985	0.0013	Stasionary
Economic Growth	-4.724.943	-4.200.056	-3.175.352	-2.728.985	0.0045	Stasionary
Poverty	-8.878.911	-4.582.648	-3.320.969	-2.801.384	0.0001	Stasionary

Source: Eviews 10 Processed Data

Table 2 shows all variables are stationary at the 5% and 10% significance levels because the ADF results are more negative than the critical value and the probability value is below 0.05.

OLS Cointegration Regression Results

Table 3. Results of OLS Cointegration Regression

Variable	Coefficient	Std. Error	t-Statistic	Prob.
C	0.689423	1.367.483	0.504155	0.6263
X1	0.567450	0.216222	2.624.386	0.0276
X2	0.506433	0.177085	2.859.835	0.0188
Adj-: R ²	: 0.729169			
Dw Stat	: 2,195807			
F-stat	: 12,11555			

Source: Eviews 10 Processed Data

Table 4. Unit Root Test Results for E

Variable	ADF Value	MacKinnon's critical value			Prob.	Information
		1%	5%	10%		
Resid	-4.788.838	-4.121.990	-3.144.920	-2.713.751	0.0034	Stasionary

Source: Eviews 10 Processed Data

The Cointegration Test aims to test whether the regression residuals are stationary or not. The cointegration test can only be carried out if the related variables have the same degree of integration.

Table 4 shows the stationary RESID (residual) at all levels of significance. The stationary cointegration regression residuals show that all variables have a long-term equilibrium relationship and form a short-term ECM model developed by Engle - Granger. The results of OLS Cointegration Regression show: (a) the open unemployment rate increasing by 1% will cause poverty to increase by 56.7% in the long term. (b) an increase in the economic growth rate of 1% will cause poverty to increase by 50.6% in the long term.

ECM Estimation Results Short-Term

Variable	Coefficient	Std. Error	t-Statistic	Prob.
C	-0.330391	0.095422	-3.462.429	0.0085
D(X1)	0.206415	0.123526	2.671.021	0.0333
D(X2)	-0.466394	0.156862	-2.973.275	0.0178
Adj- R ²	: 0.518924			
Dw Stat	: 1407114			
F-stat	: 63,93372			

Source: Eviews 10 Processed Data

From the ECM estimation results, it can be seen that economic growth has a significant effect on poverty and the level of open unemployment has no effect on poverty in the short term

The Effect of Unemployment on Poverty

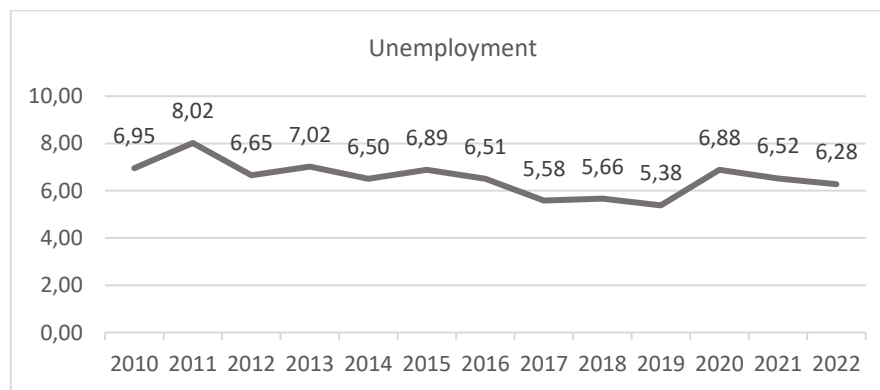


Figure 2. Unemployment Movement 2010 – 2022

Unemployment movements from 2010 – 2022 appear to fluctuate. The increase in unemployment from 2019 to 2010 was quite significant but decreased again until 2022. This is because the government was able to control the poverty rate after Covid-19.

Unemployment and poverty have a close relationship and influence each other in a complex way. Unemployment can be a direct trigger for poverty, especially in the short term. When someone loses their job, family income decreases or even disappears, which can have serious consequences for their ability to meet basic daily needs.

Losing a job can also cause economic and financial instability in the family. This can force individuals and families to face profound financial stress, with risks of homelessness, limited access to education, and a decline in overall well-being.

On the other hand, poverty can also be a risk factor for long-term unemployment. Individuals growing up in poverty-stricken environments may face limited access to education and training, which in turn may affect their opportunities to enter the labor market with adequate qualifications. One of

the efforts of the West Sumatra government to reduce unemployment is the Ustman savings program. Providing subsidies through Uthman Savings is also an instrument to protect MSMEs from the pressure of rising prices and also reduce poverty rates. The Bukittinggi City Government continues to strive to develop programs that lead to improving the community's economy and focuses more on programs that directly reduce the burden on the community.

Unemployment and poverty have a close relationship and influence each other in a complex way. Unemployment can be a direct trigger for poverty, especially in the short term. When someone loses their job, family income decreases or even disappears, which can have serious consequences for their ability to meet basic daily needs.

Losing a job can also cause economic and financial instability in the family. This can force individuals and families to face profound financial stress, with risks of homelessness, limited access to education, and a decline in overall well-being.

On the other hand, poverty can also be a risk factor for long-term unemployment. Individuals growing up in poverty-stricken environments may face limited access to education and training, which in turn may affect their opportunities to enter the labor market with adequate qualifications.

By providing stimuli to improve the community's economy and reduce the burden on society, it is hoped that the City of Bukittinggi can get through difficult times due to inflation and the global economic crisis.

The Effect of Economic Growth on Poverty

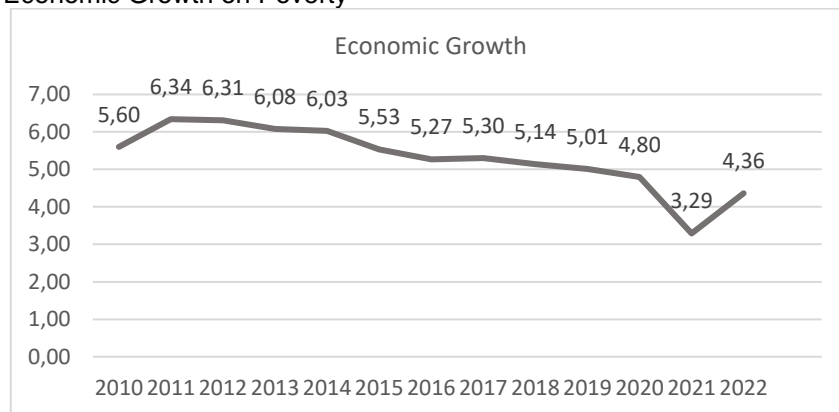


Figure 3. Economic Growth Movement 2010 – 2022

In 2023, economic growth in West Sumatra Province will increase quite significantly, reaching 4.36% or an increase of 1.07% compared to 2021. Economic conditions in West Sumatra Province continue to improve. However, this figure is still below the national average, namely 5.31%. This increase is in line with the implementation of several policies by the government in the context of intensive and sustainable economic recovery so that the national economy experiences improvement, including in West Sumatra.

The strong economic growth in West Sumatra is mainly supported by the recovery of community activities which is supported by domestic price stability and increasing community incomes along with continued job creation.

Classic Assumption Test Results

1. Normality Test

The results of the normality test using the Jarque-Bera method, as seen in Figure 5, show the Jarque-Bera probability value is greater than 0.05, which means the data is normally distributed.

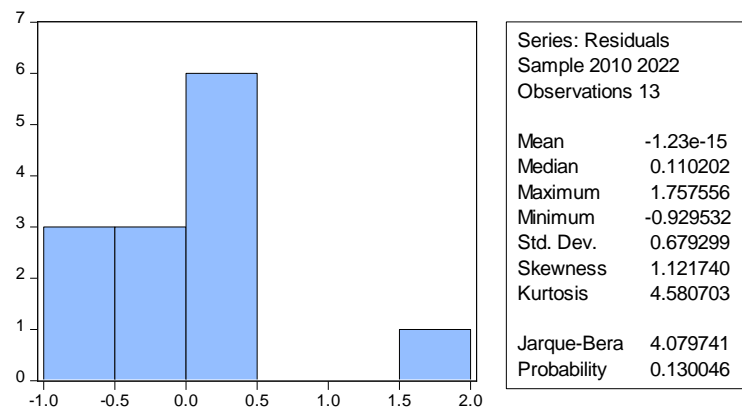


Figure 4. Normality Test Results

Based on the output, it is known that the significance value is $0.130046 > 0.05$, so it can be concluded that the data tested is normally distributed.

2. Heteroscedasticity Test

The heteroscedasticity test is used to determine whether or not there are deviations from the classic assumption of heteroscedasticity, namely the unequal variance of the residuals for all observations in the regression model.

Table 6. Heteroscedasticity Test Results

Heteroskedasticity Test: Glejser	
Prob. Chi-Square(2)	0.5460
Prob. Chi-Square(2)	0.5517

Sumber : Data Olahan Eviews 12

Based on this output, it can be seen that in the Sig column, namely the Sig value of all variables > 0.05 , so it can be concluded that there are no symptoms of heteroskedasticity.

3. Multicollinearity Test

The multicollinearity test is used to determine whether or not there are deviations from the classic assumption of multicollinearity, namely the existence of a linear relationship between independent variables in the regression model.

Table 7. Multicollinearity Test Results

Variable	Coefficient Variance	Uncentered VIF	Centered VIF
C	4.387287	102.9999	NA
X1	0.109690	110.8573	1.178386
X2	0.075277	51.05155	1.178386

Sumber : Data Olahan Eviews 12

The VIF and tolerance values above indicate that all variables in this study do not experience multicollinearity. This is indicated by a VIF value < 10 .

Discussion

The statistical analysis conducted shows that initially all variables in this study do not meet the assumption of stationarity at the zero level, as indicated by the Augmented Dickey-Fuller (ADF) value which is more positive than the critical value. In response to this non-stationarity, degree of integration testing at the first difference level was conducted. As a result, all variables show stationarity after differencing, allowing for cointegration tests. Thus, cointegration analysis and Error Correction Model (ECM) were conducted to reveal the long-run relationship between the variables.

The results of the ECM highlighted the significant effect of economic growth on poverty levels, while open unemployment has no effect on poverty in the short term.

The movement of unemployment from 2010 to 2022 shows significant fluctuations, with a notable increase in 2019 which then declines again until 2022, possibly as a result of the government's efforts in addressing the economic impact post Covid-19. This analysis also illustrates the complex relationship between unemployment and poverty. Unemployment can be a direct trigger for poverty, especially in the short term, as job loss has the potential to reduce family income. Conversely, poverty can be a risk factor for long-term unemployment, hindering access to education and training for individuals who grow up in such environments. Government efforts, such as the Ustman savings program, and a focus on developing community economic programs, are strategies in reducing the burden of unemployment and poverty in the region.

4. CONCLUSION

The conclusion that can be drawn from this research is: there is a long-term balance relationship between the unemployment variable and economic growth. The results of the analysis using the ECM approach show that the variables of unemployment and economic growth have a positive and significant effect on poverty in West Sumatra Province. The relationship between unemployment, economic growth and poverty is complex and interrelated. Success in reducing poverty levels requires a coordinated approach, including government policies that support sustainable economic growth, skills training programs to increase worker competitiveness, and an effective social safety net to protect those vulnerable to poverty due to unemployment. The government has a crucial role in efforts to reduce poverty levels by addressing the problem of unemployment and stimulating economic growth. To overcome unemployment, the government can implement proactive policies such as investing in infrastructure development and sectors that have high potential for creating jobs. Skills training programs tailored to labor market needs can also increase workers' competitiveness, help them find work, and reduce the risk of unemployment. In addition, creating an environment that supports economic growth is key to reducing poverty. The government can encourage private investment, provide tax incentives, and create policies that support entrepreneurship and the development of the small and medium business sector. Through this policy, the economy can grow more inclusively, provide wider employment opportunities, and reduce income disparities. Provide a statement that what is expected, as stated in the "Introduction" chapter can ultimately result in "Results and Discussion" chapter, so there is compatibility. Moreover, it can also be added the prospect of the development of research results and application prospects of further studies into the next (based on result and discussion). A suggestion for development is to explore specific aspects that can provide a deeper understanding of the relationship between unemployment, economic growth, and poverty in West Sumatra Province. This could include exploring the micro factors that influence the unemployment rate, such as the level of education and skills of workers. In addition, explore the impact of economic policies and labor policies on economic resilience and inequality. Consider sectoral analysis to identify sectors that have significant potential in creating jobs. Engaging a cross-disciplinary approach by considering social, economic and policy aspects will provide comprehensive insights. Involving stakeholders such as government, business and civil society in the research process can ensure more effective and relevant implementation of research results for sustainable policy development.

REFERENCES

- Astriani, A., Muchtolifah, M., & Sishadiyati, S. (2021). Pengaruh Kemiskinan, Pengangguran, Pertumbuhan Ekonomi, dan Belanja Modal Terhadap IPM Di Kabupaten Nganjuk Tahun 2010-2019. *Syntax Idea*, 3(7), 1523. <https://doi.org/10.36418/syntax-idea.v3i7.1331>
- Azulaidin, M., & Si. (2021). PENGARUH PERTUMBUHAN PENDUDUK TERHADAP PERTUMBUHAN EKONOMI. In *Jurnal Insitusi Politeknik Ganesha Medan Juripol* (Vol. 4).
- Darman. (n.d.). *PENGARUH PERTUMBUHAN EKONOMI TERHADAP TINGKAT PENGANGGURAN: ANALISIS HUKUM OKUN*.
- Dokumen, K. (n.d.). *INSTITUT TEKNOLOGI TELKOM SURABAYA FAKULTAS TEKNOLOGI INDUSTRI DAN INFORMASI PRODI STUDI REKAYASA PERANGKAT LUNAK*.

- Ekonomi, P., Kemiskinan Kabupaten, D., Kota, D., Luh, N., Ani, N. P., & Dwirandra, A. A. N. B. (n.d.). *PENGARUH KINERJA KEUANGAN DAERAH PADA*.
- Endah, M. (1990a). *Metode ECM*.
- Ernita, D. (2023). Analisis Dampak Faktor-Faktor yang Mempengaruhi Pengangguran Terhadap Pertumbuhan Ekonomi di Provinsi Jambi. *Jurnal EMT KITA*, 7(1), 173–178. <https://doi.org/10.35870/emt.v7i1.827>
- Geovani Peoha, S., Praadhi Pambudyaningtyas Jurusan Ilmu Ekonomi, K., Ekonomika dan Bisnis, F., & Kristen Satya Wacana, U. (n.d.). *ANALISA GARIS KEMISKINAN DI JAWA TENGAH TAHUN 2013-2020 DENGAN METODE ERROR CORRECTION MODEL (ECM)*. <https://ejournal.uksw.edu/inspire>
- Kemiskinan, T., Kota, K. /, Provinsi, D., Barat, K., & Yacoub, Y. (n.d.). *Pengaruh Tingkat Pengangguran terhadap*.
- Mardiatillah, R., Panorama, M., Sumantri, R., & Ekonomi Dan Bisnis Islam UIN Raden Fatah, F. (n.d.). *Pengaruh pengangguran dan inflasi terhadap tingkat kemiskinan di Sumatera selatan tahun 2015-2019*. 18(2), 2021–2279. <http://journal.feb.unmul.ac.id/index.php/KINERJA>
- Mutiarasari, A., Ekonomi, P., & Abstraksi, S. (n.d.). *Dinar: Jurnal Prodi Ekonomi Syari'ah Peran Entrepreneur Meningkatkan Pertumbuhan Ekonomi dan Mengurangi Tingkat Pengangguran Peran Entrepreneur Meningkatkan Pertumbuhan Ekonomi dan Mengurangi Tingkat Pengangguran*.
- Nadya, A., & Syafri, S. (2019b). ANALISIS PENGARUH FAKTOR PERTUMBUHAN EKONOMI, PENDIDIKAN, DAN PENGANGGURAN TERHADAP KETIMPANGAN DISTRIBUSI PENDAPATAN DI INDONESIA. *Media Ekonomi*, 27(1), 37–52. <https://doi.org/10.25105/me.v27i1.5300>
- Novriansyah, M. A. (n.d.). *Pengaruh Pengangguran dan Kemiskinan Terhadap Pertumbuhan Ekonomi di Provinsi Gorontalo*.
- Pengaruh, A., & Pengangguran, D. (2005). *LEMBAR PENGESAHAN PENULISAN ARTIKEL JURNAL Artikel Jurnal dengan judul*.
- Pengaruh PDRB, A., dan Pendidikan Terhadap Tingkat Kemiskinan di Pulau Jawa, P., Giovanni, R., Ekonomi Pembangunan, J., Ekonomi, F., & Negeri Semarang, U. (2018). *Economics Development Analysis Journal*. In *Economics Development analysis journal* (Vol. 7, Issue 1). <http://journal.unnes.ac.id/sju/index.php/edaj>
- Ramdhan, D. A., Setyadi, D., & Wijaya, A. (2017). *Faktor-faktor yang mempengaruhi tingkat pengangguran dan kemiskinan di kota samarinda*. 13(1), 1–18.
- Ratu Gandasari, T. (2016). *PENGARUH INDEKS PEMBANGUNAN MANUSIA DAN PENGANGGURAN TERHADAP KEMISKINAN DI PROVINSI BANTEN*. 6(2). <http://jurnal.untirta.ac.id/index.php/>
- Sabrina, C. N., & Suhartono, E. (2023). Jumlah Tenaga Kerja dan Jumlah Pengangguran Terhadap Pertumbuhan Ekonomi Provinsi Jawa Timur Tahun 2012-2021. *Sosio E-Kons*, 15(1), 1. <https://doi.org/10.30998/sosioekons.v15i1.15051>
- Sianturi, V. G., Syafii, M., & Tanjung, A. A. (2021). ANALISIS DETERMINASI KEMISKINAN DI INDONESIA STUDI KASUS (2016-2019). *Samuka*, 5(2). <https://ejournalunsam.id/index.php/jse>
- Sirait, N. (n.d.). *E-Jurnal EP Unud*, 2 [2]: 108-118 *ANALISIS BEBERAPA FAKTOR YANG BERPENGARUH TERHADAP JUMLAH PENGANGGURAN KABUPATEN/KOTA DI PROVINSI BALI*.
- Soejoto, A., & Karisma, A. (n.d.). *Pertumbuhan Ekonomi Dan Pengangguran Terhadap Kemiskinan Di Jawa Timur*. www.bps.go.id