Does Economic Growth Interact With The Basic Sector, Human Development, and Provincial Minimum Wage on Poverty in Sumatra Island Provinces?

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KEYWORD

Poverty, Economic Growth, Base Sector, Human Development Index, Regional Minimum Wage, ARDL, Location Qoutient.

ABSTRACT

A high level of poverty in an area can have a significant impact on the economic performance of a region. This study will analyze the influence of the base sector, human development, and provincial minimum wage on poverty through the role of GDP growth in Sumatra. The ARDL and Location Quotient (LQ) panel data regression methods were used to analyze panel data consisting of 10 provinces in Sumatra for the period 2011 to 2022. The findings found that there is one sector that is dominant in all provinces on the island of Sumatra, namely the Agriculture, Fisheries, and Forestry sectors. The direct influence between the variables of the base sector, human development, and regional minimum wage on poverty and economic growth shows that in the long run, human development and the minimum wage have a negative effect on poverty and economic growth in a positive direction, while the base sector has no effect on poverty and economic growth. Economic growth plays a mediating role in mediating the three variables. The government, in reducing poverty and encouraging inclusive economic growth, is advised to allocate greater resources and investment to the agriculture-based sectors, and the government can also focus policies on increasing human development and minimum wage, considering that these variables have proven to have a positive influence on economic growth directly.

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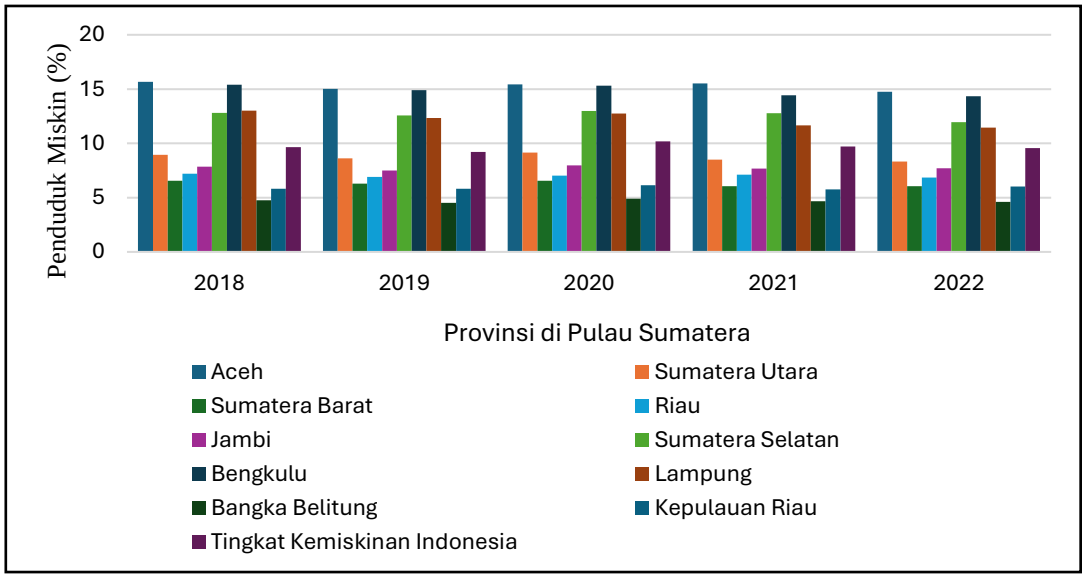
INTRODUCTION

Poverty is the main focus in the development agenda of developing countries, a challenge that must be overcome comprehensively. This is a common concern for all developing countries, which place poverty alleviation as one of the top priorities in efforts to achieve development goals (Mukthar et al., 2019). The issue of poverty is creeping to the surface as the number of poor people soars sharply as a result of the ongoing economic crisis. The problem of poverty in Indonesia has now reached an urgent national level, forcing the government to actively seek solutions in an effort to overcome this challenge and lift the welfare of the people of Indonesia out of the trap of poverty (Sabyan & Widyanti, 2022).

Provinces on the island of Sumatra and other densely populated areas face high poverty, measured by the number of individuals below the poverty line and the percentage of the poor population, although Sumatra is famous for its natural resources, such as its mining products and coconut plantations, poverty is still rampant in many regions. Factors such as lack of access to quality education, lack of formal employment, and limited infrastructure further complicate this situation (Darsana & AA Gede, 2019). To support the above narrative, the following poverty data is attached:



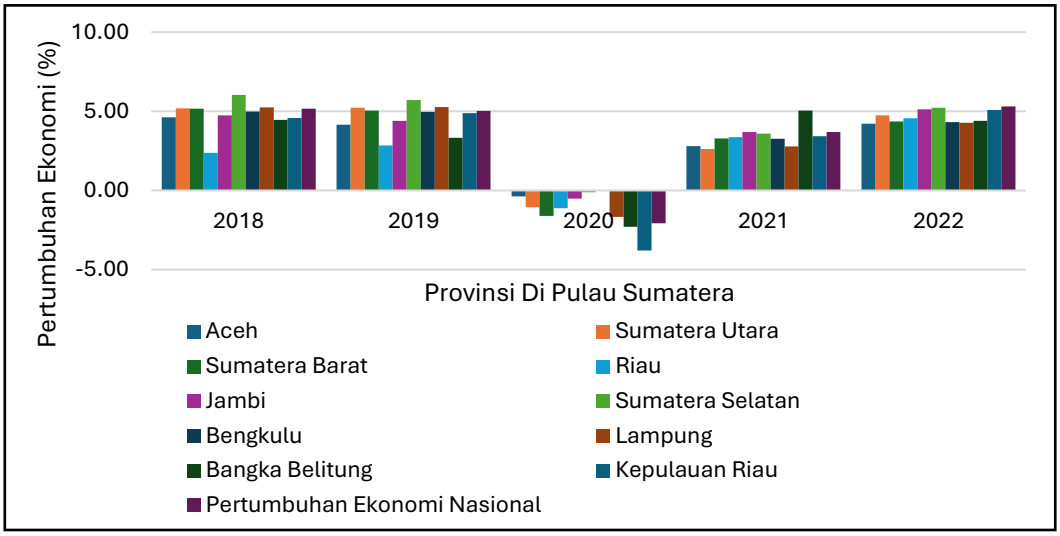
Source: Central Statistics Agency, (2023)

Figure 1. Percentage of Poor People in the Province on the Island of Sumatra in 2018 – 2022 (Percent)

The percentage of poor people in Sumatra between 2018-2022 fluctuated in each Province, influenced by government policies, global and local economic conditions, and natural factors such as disasters or climate change. For example, Aceh's decline in 2022 may be due to post-disaster recovery or social programs. South Sumatra was stable until 2021 but declined in 2022 due to changes in social and economic policies.

Every country has goals to achieve in its economic development. One of the main goals that continues to occupy a central position among the macroeconomic goals of developing countries is to achieve economic growth. Economic growth refers to the increase in a country's productive capacity and changes in the growth rate of Gross Domestic Product (GDP) (Picardo, 2020). The economic development of a region cannot be separated from economic growth; this is because the two things are mutually sustainable with each other where good economic development will encourage an increase in economic growth, and if economic growth goes

well, it will facilitate the process of economic development (Muna, 2023). The following is data on economic growth on the island of Sumatra in recent years:



Source: Central Statistics Agency, (2023)

Figure 1.2 Economic Growth in Provinces on the Island of Sumatra in 2018 – 2022 (Percent)

Economic growth on the island of Sumatra in 2018-2022 fluctuated. In 2018, the majority of provinces showed positive growth, and South Sumatra was the highest (6.04%). In 2020, the majority experienced a significant decrease due to the pandemic; the Riau Islands recorded negative growth (-3.80%). In 2021-2022, the majority recovered with positive growth, marking a post-pandemic economic recovery. Factors such as government policies, investment, and economic sectors play a role in fluctuations.

The development of certain economic sectors can be seen from the base sector of a region, which will help encourage the economic growth rate of the region so that the sectoral approach becomes a strategy for encouraging the economy and the potential of a region. The development of the base sector must be optimized because this sector can be the driving force of the economy in each region (Solikin et al., 2018). This is in line with what was conveyed (Aulianur et al., 2023) that the basic model of the basic economy can determine a brief overview of the economy of a region because it can be used to predict the effect of economic growth from outside the region on the economy of a region. The development of the base sector is important for the region as one of the right development patterns to be applied in the region.

The Human Development Index (HDI) was formulated by the United Nations in 1990 as a composite index to evaluate long-term achievements in three main aspects of human development: longevity, educational attainment and access to knowledge, and decent living standards (Prasetyo, 2023). The HDI measurement components are education, health, and expenditure, which are very important to improve because they will have an impact on productivity and income increase, which will result in poverty rates tending to decrease (Prasetyo & Fitanto, 2023). HDI is a benchmark for the development of a country in terms of health, education, and living standards. The higher the HDI of a country, the better the welfare and quality of life of its people. Therefore, the higher the HDI in Indonesia, the less likely it is that people will live in poverty (Aisyah et al., 2023).

Wages are one of the other factors that can affect poverty levels. The increase in the provincial minimum wage is the main driver in increasing the number of workers and affects the level of labor absorption in various industrial sectors (Pratama & Silvia, 2020). Along with

the increase in wages that must be borne by companies, the spirit of setting the provincial minimum wage has proven to be in line with the goal of improving the economic conditions of workers, especially in the Sumatra region. The positive impact of this policy is the creation of a more stable and equitable economic environment, which in turn will spur sustainable economic growth and improve the welfare of the working community as a whole (Mankiw, 2014).

The Base Sector, Human Development Index (HDI), and Provincial Minimum Wage (UMR) have an important role in economic growth and poverty alleviation. However, research that integrates these three factors is still rare. Through this study, there is an opportunity to explore more thoroughly the complex relationship between the phenomenon of poverty, the dynamics of economic growth, and key variables such as the base sector, the human development index, and the provincial minimum wage in the Sumatra Island region. The purpose of this study is to analyze the base sectors on the island of Sumatra, human development, and the provincial minimum wage, as well as the long-term and short-term effects on the poverty rate through the economic growth of the island of Sumatra.

RESEARCH METHODS

The scope of this study includes an analysis of the role of economic growth in mediating the influence of the base sector, human development index, and provincial minimum wage on poverty rates in 10 Sumatra Island Provinces. The data collected in this study is secondary data obtained from the report of the National Central Statistics Agency (BPS). By its nature, quantitative data is data in the form of numbers that can be measured with a certain measure and have a certain value (Silvia, 2020). The quantitative data used is a section combined panel data consisting of 10 provinces on the island of Sumatra and *the Times Series* with the observation year 2011 - 2022. The data used in this study are the percentage of the poor population, the percentage of regional economic growth rate, the 2010 ADHK PRDB by business field, the human development index, and the provincial minimum wage.

This study uses two methods. The location quotient (LQ) analysis approach is used to identify the economic sectors that are the base sectors. This analysis is used to determine the state of the base and non-base economy. The goal is to find out the advantages of compatibility in each sector of the city, measuring from the base or non-base version. After finding the LQ value in an economic base sector, it will be analyzed using descriptive and inferential analysis methods. The goal is to find out the advantages of compatibility in each sector of the city, measuring from the base or non-base version. The base sector is a sector with an LQ value of > 1. At the same time, non-base is a sector with an LQ value of < 1. The LQ calculation is formulated as follows (Tarigan, 2015):

$$LQ = \frac{V_{ij}/V_j}{PDRB_{iR}/PDRB_R} \quad \text{..... (3.1)}$$

Information:
Vij: GDP Value of Sector i in Province j
Vj: Total GDP in Province j
PDRBiR : GDP Value of Sector I in Sumatra
PDRBR : Total GDP of Sumatra

After the LQ value in an economic base sector is found, it will be analyzed using descriptive and inferential analysis methods, and inferential analysis will be used in the form of panel data regression analysis and path analysis. The ARDL method is a dynamic model in econometrics that describes the flow of time-independent variables in relation to values in the past. A combination of autoregressive (AR) and distributed lag (DL) methods, ARDL allows

the use of past data from dependent variables to see future values. Thus, this model can distinguish short-term and long-term responses from the variables studied (Jumhur, 2020).

Equation 1:

$$\Delta EG_t = \alpha_0 + \sum_{i=1}^{n} \alpha_{1i}\Delta EG_{j,t-i} + \sum_{i=1}^{n} \alpha_{2i}\Delta LS_{j,t-i} + \sum_{i=1}^{n} \alpha_{3i}\Delta HDI_{j,t-i} + \sum_{i=1}^{n} \alpha_{4i}\Delta MWR_{j,t-i} + \beta_{11}EG_{j,t-i} + \beta_{21}LS_{j,t-i} + \beta_{31}HDI_{j,t-i} + \beta_{41}MWR_{j,t-i} + u_{j,t}$$

Equation 2:

$$\Delta POV_{j,t} = \alpha_0 + \sum_{i=1}^{n} \alpha_{1i}\,\Delta POV_{j,t-i} + \sum_{i=1}^{n} \alpha_{2i}\,\Delta EG_{j,t-i} + \sum_{i=1}^{n} \alpha_{3i}\,\Delta LS_{j,t-i} + \sum_{i=1}^{n} \alpha_{4i}\,\Delta HDI_{j,t-i} + \sum_{i=1}^{n} \alpha_{5i}\,\Delta MWR_{j,t-i} + \beta_{11}\,POV_{j,t-1} + \beta_{21}\,EG_{j,t-1} + \beta_{31}\,LS_{j,t-i} + \beta_{41}\,HDI_{j,t-i} + \beta_{51}\,MWR_{j,t-i} + u_{j,t}$$

Then it can be explained the variables (poverty), (economic growth), (human development), (Regional Minimum Wage), (Leading Sectors), (Short-term dynamics of the model), (Long-term relationship of the model), (Difference (change) between two values of a variable), (Normally distributed error).$POVEGHDIMWRLS\beta_0, \beta_1, \beta_3, \beta_4\beta_5, \beta_6, \beta_7\Delta u_t$

Path Analysis (Jalur Analisis)

This analysis is used to analyze the influence or direct relationship between independent variables and dependent variables, as well as indirect influences or relationships through mediation or intervening variables. Path analysis is first carried out to form a path that can be seen from the square root formed from the value of the determination coefficient (*R-squared*). After these stages are carried out, each variable formed in the path analysis must have a significant direct influence on the independent variable (Silvia et al., 2023).

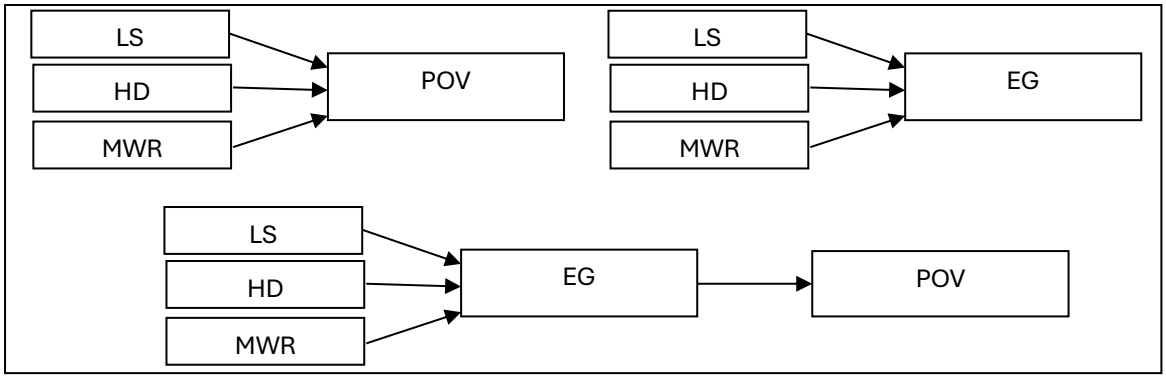


Figure 3. Path Analysis

Sobel Test (Uji Sobel)

As for finding out whether the relationship through a mediating variable is significantly able to act as a mediator in the relationship, the Sobel test is used. The formula used in this test is:

$$x = \frac{\text{ab}}{\sqrt{(b^2\text{SE}_a^2) - (a^2\text{SE}_b^2)}}$$

Where:

A = Regression coefficient of independent variables to mediating variables.
b = Regression coefficient of the mediating variable against the independent variable.
A = Standard error of estimation of the influence of independent variables on mediation.
SEb = Standard error of estimation of the influence of mediating variables on independent variables.

If the result of the calculated z-value is greater than the z-table at a significance level of up to 5 percent, then the mediating variable can significantly mediate the independent variable against the dependent variable.

RESULTS AND DISCUSSION

4.1 Descriptive Statistics

This analysis is an initial study that aims to identify relevant research variables to understand the phenomenon being studied. The data that has been collected will be processed and analyzed to obtain descriptive statistics that will provide a summary of the characteristics of each variable. These descriptive statistics will provide an overview of the distribution of data and its characteristics. Then it can be seen as follows:

Table 4. 1 Descriptive statistics

Data	LS(Index)	HDI(%)	LOGMWR(%)	Growth(%)	Poverty(%)
Minimum	0.278356	64.20000	13.61094	-0.020000	14.64000
Mean	1.877789	70.13108	14.45863	4.514250	16.26000
Maximum	2.506469	76.46000	15.04330	7.860000	18.05000
Std. Dev.	0.418985	2.475598	0.361387	1.731557	1.116408
Observation	120	120	120	120	120

Source*: Data Processed (2024).*

Some descriptive statistics show the data characteristics of the explanatory variables of the base sector, human development, and regional minimum wage, as well as the endogenous variables of economic growth and poverty. This combined panel of data covering 120 observations has average, minimum, maximum, and standard deviation values that describe the distribution and dissemination of data. The base sector has an average value of 1,877 with a standard deviation of 0.418, average human development of 70.13 with a standard deviation of 2,475, average regional minimum wage of 14,458 with a standard deviation of 0.361, average economic growth of 4,514 with a standard deviation of 1,731, and average poverty of 16,260 with a standard deviation of 1,116. The data showed that the level of deviation for all variables was relatively low, indicating an even distribution of the data.

4.2 Data Identification Analysis

4.2.1 Stationary Test

The stationary test using the Augmented Dickey-Fuller (ADF) method aims to determine whether a time series is stationary or not. The ADF method uses regression equations in the form of Dickey-Fuller Augmented to test the existence of unit roots. This ADF test involves testing a hypothesis to make a decision whether or not a variable can be considered stationary. The results of the stationary test in this study are shown in Table 4.1 below:

Table 4.2 Variable Stationary Test

Variable	Level		First Different		Second Different	
	Augmented Dickey-Fuller T-statistic (5%)	Prob.	Augmented Dickey-Fuller T-statistic (5%)	Prob.	Augmented Dickey-Fuller T-statistic (5%)	Prob.
LS	27.2687	0.1279	34.3890	0.0167	48.6503	0.0003
HDI	16.9048	0.6591	34.3255	0.0121	63.3589	0.0000
LOGMWR	80.6401	0.0000	9.67419	0.9737	66.6209	0.0000
GR	27.7225	0.1161	63.4145	0.0000	67.7574	0.0000

POV	18.3384	0.5651	42.0429	0.0027	55.4527	0.0000

Source: Data Processed (2024)

Based on the information from Table 4.2, it can be stated that the results of the stationary test for the level-level variable show that only the regional minimum wage and the rest of the variables are stationary because the ADF Probability value is above the 5% significance level. As a next step, a First Difference level test was carried out, but the result was only a non-stationary minimum wage with the probability of ADF being above the 5% significance level. At the Second Difference level, and the results showed that all the variables tested had reached a significance level below 5%.

4.2.2 Determination of Optimal Lag

Determining the optimal lag involves using informational criteria, such as the Akaike Information Criterion (AIC) or the Schwarz Bayesian Information Criterion (BIC), to select the most appropriate amount of lag for the ARDL model. The process of determining the optimal lag begins by testing different ARDL models with different lags. Each model is then evaluated using informational criteria to measure how well the model understands the data by taking into account its complexity.

Table 4.3 Optimum Lag of the Three Models

Type	LogL	AIC*	BIC*	HQ*	ARDL Lag
1	-109.09160	3.241832	4.622572	3.800643	ARDL (1, 1, 1, 1)
2	-85.813159	2.776263	4.157003	3.335074	ARDL (1, 1, 1, 1)
3	-87.315218	2.826304	4.233096	3.395658	ARDL (1, 1, 1, 1)

Source: Data Processed (2024)

Table 4.3 shows that the determination of the optimal lag on the ARDL panel is found in the most optimal model (1,1,1,1) based on the statistical criteria used. The three models in this study chose the first lag as the optimal one, which is expected to provide better results in analyzing the long-term and short-term relationships between the variables in this study.

4.2.3 Cointegration Test

The analysis test used aims to identify long-term relationships between two or more time variables. This method is useful for overcoming the problem of nonstationarity in economic data and allows the evaluation of the causal relationship between the research variables. The test criteria used a significant level of 5%, where the hypothesis is acceptable if the probability value is less than 0.05. The following are the results of the cointegration test in this study:

Table 4.4 Variable Cointegration Test

Pedroni Cointegration Test	***Statistics***	***Weighted Statistic***
V-Statistic Panel	-0.684310(0.7531)	-1.069822
rho-Statistic Panel	2.250091(0.9878)	2.396694
Panel PP-Statistic	-1.279371(0.1004)	-1.302613
Panel ADF-Statistic	0.023376(0.5093)	-0.186160
Group rho-Statistic	3.763226(0.9999)	
Group PP-Statistic	-2.690236(0.0036)	
Group ADF-Statistic	0.751242(0.7737)	
KAO Cointegration Test	***Prob.***	
ADF	0.0126	

Source: Data Processed (2024)

The results of the ARDL panel cointegration test showed that most of Pedronion's statistics do not show any cointegration due to the high p-value, except for Group PP-Statistic, with a p-value of 0.0036. The KAO test also showed a cointegration with a p-value of 0.0126. Although most of Pedroni's statistics do not support the existence of cointegration, the results of the Group PP-Statistic and the KAO Test show that there is a cointegration in the data panel, which shows that the variables of the base sector, human development, regional minimum wage, economic growth, and poverty are well correlated and well cointegrated from the short to the long term.

4.3 Research Results

Determining the base sector is an important step in the economic planning and development of a country or region. This process involves identifying economic sectors that have the potential to be the main drivers of economic growth. The base sector that has the most in a region will be used in the next processing stage; therefore, before moving to the data processing stage, the researcher will first look for the base sector based on the region as follows:

Table 4.5 Determination of Base Sectors by Sumatra Province

GDP Sector	Selected Range		
	8 - 10	5 - 7	1 - 4
A. Agriculture, Forestry, and Fisheries	*********	-	-
B. Mining and quarrying	-	*****	
C. Processing Industry	-	-	****
D. Electricity and Gas Procurement	-	-	-
e. Water Procurement, Waste Management, Waste and Recycling	-	*****	-
F. Construction	-	-	***
g. Wholesale and retail trade; Car and Motorcycle Repair	-	*****	-
H. Transportation and Warehousing	-	*****	-
I. Provision of Accommodation and Food and Beverage	-	-	-
J. Information and Communication	-	-	*
K. Financial Services and Insurance	-	-	-
L. Real Estate	-	*****	
M, N. Corporate Services	-	-	*
O. Government, Defense, and Compulsory Social Security Administration	-	-	****
P. Educational Services	-	-	***
Q. Health Services and Social Activities	-	-	****
R, S, T, U. Other Services	-	-	-

Source: Processed Data, (2024).

Description: the sign (*) represents the selected Province

Based on Table 4.5, it seems that the agricultural sector dominates as the base sector in Sumatra Province compared to other sectors, so this study decided to use the base sector index value in the agriculture, forestry, and fisheries sectors as an explanatory variable for poverty through economic growth mediating variables.

The analysis of this study interprets the relationship between the explanatory variable and the affected variable by using three ARDL panel regression equation models to obtain accurate parameter coefficients. The ARDL Panel approach evaluates the influence of base sectors, human development, and the regional minimum wage on poverty, with economic growth as a mediating variable, both in the long and short term. The following table provides a breakdown of the characteristics and relevant data for each variable, aiming to provide a comprehensive understanding of the contribution and interaction of the variables in the model.

Table 4.6 Results of Data Regression of ARDL Panel Poverty Function

Variable	Prob. Value					
	Short Run			Long Run		
	Coefficient	T-Statistic	Prob.	Coefficient	T-Statistic	Prob.
Cointq	-0.5015	-5.0191	0.000***			
LS	1.9870	1.5567	0.125	0.460	0.7075	0.482
HDI	1.3004	1.9910	0.051*	-4.546	-6.4093	0.000***
LOGMWR	-0.4104	-0.0991	0.921	-2.645	-6.1472	0.000***

Source: Data Processed (2024)
Note: significant level ***(1%), **(5%),*(10%).

Based on Table 4.6, the cointegration variable (Cointq) shows the existence of a significant error correction mechanism with a coefficient of -0.5015, T-Statistic -5.0191, and Prob. Value 0.000, which means that the deviation from the long-term balance will be adjusted by 50.15 percent. The base sector did not affect poverty in both the short term (Prob. 0.125) and the long term (Prob. 0.482), with coefficients of 1.9870 and 0.460, respectively. Human development has a significant impact on reducing poverty both in the short term (coefficient -1,300, Prob. 0.051) and long-term (coefficient -4,546, Prob. 0.000). The minimum wage does not affect short-term poverty (Prob. 0.921, coefficient -0.410), but has a significant long-term impact on reducing poverty (Prob. 0.000, coefficient -2.645).

Table 4.7 Results of Data Regression of ARDL Panel Economic Growth Function

Variable	Prob. Value					
	Short Run			Long Run		
	Coefficient	T-Statistic	Prob.	Coefficient	T-Statistic	Prob.
Cointq	-1.2060	-17.536	0.000***			
LS	-2.0739	-0.8901	0.377	2.9257	52.275	0.000***
HDI	5.0149	5.1647	0.000***	1.6755	-17.925	0.000***
LOGMWR	4.4173	1.1567	0.252	0.7913	18.250	0.000***

Source: Data Processed (2024).
Note: significant level ***(1%), **(5%),*(10%).

Table 4.7 shows a strong long-term relationship between the variables studied and economic growth. The negative coefficient of cointegration indicates a rapid error correction mechanism, corrects deviations from long-term equilibrium, and indicates the stability of the model in the long term. In the short term, the base sector has no effect on economic growth but has a positive effect in the long term. Human development has a positive effect on economic growth both in the short and long term. The minimum wage has no effect in the short term but has a positive effect in the long term. The study used three ARDL panel regression models to

analyze the relationship of explanatory variables with poverty, with particular attention to how economic growth mediates these relationships.

Table 4.8 Data Regression of ARDL Panel Mediation Variables on Poverty

Variable	Prob. Value					
	Short Run			Long Run		
	Coefficient	T-Statistic	Prob.	Coefficient	T-Statistic	Prob.
Cointq	-0.3564	-5.4536	0.000***			
GR	-0.2572	5.2524	0.000***	-0.7222	-7.0548	0.000***

Source: Data Processed (2024)
Note: significant level ***(1%), **(5%),*(10%).

The results of cointegration in Table 4.8 show that economic growth and poverty have a significant long-term relationship with a cointegration value of -0.3564, t-statistic -5.4536, and probability of 0.000. This association indicates that any deviation from the long-term balance will be corrected at a rate of 35.64% per period, reducing poverty significantly. A very small probability confirms that this result is statistically significant.

4.3.1 Sobel Test

The results of the soil test in this study can be described into three models shown in Table 4.8, and details about mediation are found in the role of economic growth in mediating the variables of the base sector, human development, and minimum wage against poverty on the island of Sumatra.

Table 4.9 Variables of Economic Growth Mediation Against Poverty

Mediation	Prob. Value			
	Short Run		Long Run	
	S-Statistic	Prob.	S-Statistic	Prob.
LS → GR → POV	-0.8776	0.190	5.2267	0.000***
HDI → GR → POV	3.6822	0.000	-5.0416	0.000***
MWR → GR → POV	1.1297	0.129	5.0486	0.000***

Source: Data Processed (2024)
Note: significant level ***(1%), **(5%),*(10%).

Mediation analysis shows that in the short term, economic growth cannot mediate the relationship between the base sector and poverty (p = 0.190 > 10%), but in the long term, it is able (p = 0.000 < 0.01). For human development variables, economic growth can mediate the relationship with poverty in both the short and long term (p = 0.000 < 1%). As for the minimum wage variable, economic growth cannot mediate in the short term (p = 0.129 > 10%), but it can in the long term (p = 0.000 < 0.01). This shows that the role of economic growth as a mediator varies depending on the time period and variables analyzed.

4.4 Discussion and Implications of Research Results

The results of the analysis of the first equation model show that the base sector, human development, and minimum wage have a significant influence on economic growth in Sumatra.

Base sectors such as agriculture provide a long-term positive impact on the economy through increased productivity, economic diversification, and increased human capacity. However, the impact may not be immediately visible in the short term due to structural adjustments and large initial investments. The results of Mhaka & Runganga's (2023) research show that agricultural production has a positive impact on economic growth in the long term but not in the short term. The agricultural sector plays a crucial role in long-term economic development, making a significant contribution to economic growth as the economy develops (Awam et al., 2015). On the island of Sumatra, the agricultural sector plays an important role in long-term economic growth through food security, labor absorption, and export income (Akadiri et al., 2022). Although agriculture creates the foundation for sustainable economic development by increasing rural household incomes and boosting the agricultural processing industry, challenges such as weather uncertainty, commodity price fluctuations, and technological limitations often hinder its effects in the short term (Wang et al., 2017).

Research also shows that human development has a positive influence on economic growth both in the short and long term. Investments in education, health, and human skills increase labor productivity and purchasing power, which in turn drives consumption and economic growth. In the long run, better education and health produce a more skilled and innovative workforce, as well as extend productive lifespans. The results of the research by Rahman et al. (2020) show that human development has a significant positive effect on economic growth in the long and short term, with a significance level of 1%. These findings support the Cobb-Douglas contribution theory, which considers the role of human capital in economic growth, as well as the neoclassical growth theory, which emphasizes the importance of human capital in production (Khatoon et al., 2021). Higher education, better health, and increased incomes contribute to improved living standards, improved intellectual abilities, and labor productivity, ultimately strengthening overall economic growth (Gulcemal, 2020).

The provincial minimum wage has a strong influence on economic growth in the long term, although the impact is not significant in the short term. Increases in the minimum wage increase workers' purchasing power, encourage domestic consumption and spur companies to invest in technology or training to increase productivity. In the long term, an increase in the minimum wage could stimulate production and investment, contributing to stronger economic growth. The findings of this study are in line with Rizal & Mustapita (2024), who stated that an increase in the minimum wage can increase overall consumer purchasing power. The short-term impact may not be immediately apparent as companies and workers need time to adapt to the new policies. Companies may incur additional costs without changing the price of their products or operations, while workers may not feel the full increase in purchasing power. However, in the long term, an increase in the minimum wage can boost domestic consumption and stimulate production and investment (Bicerli & Kocaman, 2019; Screwdriver, 2015).

The second model equation, the latest research, evaluates the influence of the base sector, human development, and the regional minimum wage on poverty. The results show that the base sector has no significant effect on poverty in the long or short term, with probability values of 0.482 and 0.125, which are lower than the significance level of 10%. Structural and economic factors also explain that the agricultural sector is ineffective in reducing poverty due to dependence on weather factors and fluctuations in market prices. Agricultural workers generally face low wages and unstable working conditions, which hinder their chances of getting out of poverty (Siburian, 2021; Adeneye & Aremu, 2020).

The findings of this study are in line with previous studies such as Garidzirai & Meyer (2020) which found that the agricultural sector has no effect on poverty, because in the short term, farmers' incomes are often not stable or high enough to bring about significant changes in living standards, especially due to volatile and often low commodity prices.

This study shows that human development is closely related to poverty levels, with positive effects in the short term and negative effects in the long term. Short-term analysis highlights that investments in human capital, such as education, health, and per capita expenditure, take time to have a significant productive impact. Sustainable investment in these sectors creates a strong foundation for inclusive and sustainable economic growth (Dahliah, 2023; Ali et al., 2019). This study concludes that human capital has a significant effect in the long and short term. Improving access to and quality of education, health, and income, as well as the Human Development Index (HDI), form a solid foundation for improving human capacity and quality of life. Better education provides the skills and knowledge to enter the labor market better, while better access to healthcare improves the physical and mental well-being of individuals. Increasing incomes help reduce economic inequality and increase access to economic opportunities (Syofya 2018; Adeniyi & Ameru 2020).

The regional minimum wage has a long-term negative effect on poverty (prob. 0.000 < 1%) but has no effect in the short term (prob. 0.921 > 10%). David Card and Alan B. Krueger note that the minimum wage can reduce poverty by increasing the income of low-wage workers, thereby increasing their purchasing power to meet basic needs such as food, housing, health, and education. This increase in purchasing power not only improves the well-being of individuals and their families but also encourages domestic consumption, which contributes to economic growth. The results of this study are in line with previous research (Tanjung et al., 2024), which stated that the minimum wage has a negative effect on poverty reduction. Increasing the minimum wage can scientifically reduce poverty by increasing the direct income of low-wage workers, who are often below the poverty line (Sotomayor, 2021).

This analysis shows that economic growth has not been able to mediate the influence of the base sector on poverty rates with sufficient significance, with a probability value of 0.190 > 10% in the long term and 0.000 < 0.05 in the short term. The agricultural sector, with its low productivity and informal working conditions, does not exert a significant influence in reducing poverty through economic growth. In contrast, human development, reflected in the Human Development Index (HDI), plays an important role in reducing poverty through increased productivity and better employment. In addition, the regional minimum wage shows a more significant long-term influence on poverty through economic growth, although its impact in the short term is still limited.

CONCLUSION

The dominant agriculture, fisheries, and forestry sectors on the island of Sumatra are the main focus in the analysis of poverty and economic growth, while sectors such as mining, water supply, waste management, transportation, warehousing, and real estate also have a significant role. The variables of the base sector, human development, and regional minimum wage show different influences on poverty and economic growth in the long and short term. In the long term, human development and the regional minimum wage have a negative impact on poverty, while the base sector is insignificant. In the short term, only human development affects poverty, while the base sector and minimum wage have no effect. The influence on economic growth shows that in the long term, all three variables have a positive effect, but only human development has an effect in the short term, with the base sector and the minimum wage not significant. Economic growth plays a mediator in long-term poverty reduction through human development, while it is unable to mediate the influence of the base sector and the minimum wage in the short term. The government needs to focus on economic diversification and increasing productivity in the agricultural sector through technology investment, access to capital, and skills training. This will strengthen the contribution of the agricultural sector to long-term economic growth. In addition, investment in human development by improving access and quality of education and health services and incentives for private investment can

support an increase in the Human Development Index (HDI), creating a strong foundation for inclusive economic growth. Prudent regional minimum wage arrangements and investments in transportation infrastructure and digital connectivity are also needed to improve market access and competitiveness of Sumatran products in national and international markets. Furthermore, the development of sustainable economic policies that take into account environmental, social, and economic aspects will create an environment that supports inclusive and sustainable economic growth in Sumatra.

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