

## ***T Breaking The Cycle: How Gross Regional Domestic Product, Human Development Index, Regional Minimum Wage, And Life Expectancy Index Impact Poverty Levels***

### **Memutus Siklus: Bagaimana Produk Domestik Regional Bruto, Indeks Pembangunan Manusia, Upah Minimum Regional, Dan Indeks Harapan Hidup Berdampak Pada Tingkat Kemiskinan**

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#### **ABSTRACT**

This study aims to examine the effects of Gross Regional Domestic Product (GRDP), Human Development Index (HDI), Regional Minimum Wage (MW), and Life Expectancy Index (LEI) on poverty levels in Bengkalis Regency. The object of this study is Bengkalis Regency, one of the regencies in Riau Province. This research utilizes panel data over a 10-year period from 2013 to 2023, obtained from the publications of the Bengkalis Regency Statistics Agency (BPS). The data analysis tool employed is the Ordinary Least Squares (OLS) model with the assistance of Eviews 12 software. The results indicate that the Human Development Index and Life Expectancy Index significantly affect poverty levels in Bengkalis Regency, whereas Gross Regional Domestic Product and Regional Minimum Wage do not have a significant impact on poverty levels in the regency.

**Keywords:** *Gross Regional Domestic Product, Human Development Index, Regional Minimum Wage, Life Expectancy Index, Poverty, Bengkalis Regency.*

#### **ABSTRAK**

Penelitian ini bertujuan untuk menguji pengaruh Produk Domestik Regional Bruto (PDRB), Indeks Pembangunan Manusia (IPM), Upah Minimum Regional (UMR), dan Indeks Harapan Hidup (IHH) terhadap tingkat kemiskinan di Kabupaten Bengkalis. Objek penelitian ini adalah Kabupaten Bengkalis, salah satu kabupaten di Provinsi Riau. Penelitian ini menggunakan data panel selama periode 10 tahun dari tahun 2013 sampai dengan tahun 2023 yang diperoleh dari publikasi Badan Pusat Statistik (BPS) Kabupaten Bengkalis. Alat analisis data yang digunakan adalah model Ordinary Least Squares (OLS) dengan bantuan perangkat lunak Eviews 12. Hasil penelitian menunjukkan bahwa Indeks Pembangunan Manusia dan Indeks Harapan Hidup berpengaruh signifikan terhadap tingkat kemiskinan di Kabupaten Bengkalis, sedangkan Produk Domestik Regional Bruto dan Upah Minimum Regional tidak berpengaruh signifikan terhadap tingkat kemiskinan di kabupaten tersebut.

**Kata Kunci:** Produk Domestik Regional Bruto, Indeks Pembangunan Manusia, Upah Minimum Regional, Produk Domestik Regional Bruto, Indeks Pembangunan Manusia, Upah Minimum Regional, Indeks Harapan Hidup, Kemiskinan, Kabupaten Bengkalis,

#### **1. Introduction**

The development of social welfare is an effort to achieve national goals based on the 1945 Constitution and Pancasila. Article 34 paragraph (1) of the 1945 Constitution affirms the state's obligation to guarantee the rights of poor citizens. Poverty is a global issue faced by both developed and developing countries. In Indonesia, poverty remains a priority issue for both central and local governments, with various policies enacted to address it. One approach is through state expenditures budgeted in the State Budget (APBN) and Regional Budget (APBD)

Poverty is a condition in which an individual is unable to meet their basic needs, including knowledge, skills, financial resources, adequate nutrition, water quality, housing, healthcare facilities, and education. According to Kotze, poor communities have a relatively good ability to utilize available resources even though external assistance is not always relied

upon. However, social isolation leads to passive attitudes and exacerbates poverty (Hikmat, 2006). Poverty often occurs not by the will of the individual. It is characterized by low levels of education, work productivity, income, health, and overall well-being (Suhato, 2005). According to the theory of the vicious cycle of poverty, conditions of underdevelopment, market imperfections, and lack of capital lead to low productivity and income, which in turn hinder savings and investment (Kadji, 2004).

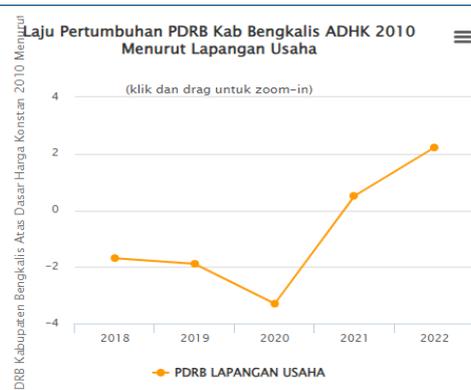
Poverty is one of the most challenging issues to solve, including in Indonesia. The country aims to create welfare for all its people, but many challenges must be faced to achieve this goal. As an archipelagic state, one of its regions is Sumatra Island. The following presents the poverty levels by province in Sumatra Island in 2022:

**Table 1. Poverty Levels by Province in Sumatra Island in 2022**

No	Province	Poverty Line	Number of Poor Population	Persentase Penduduk Miskin	Percentage of Poor Population	Average Daily Income
1	Aceh	579227	806,82	14,64	Rp1.447,35	Rp48,24
2	Sumatera Utara	561004	1268,19	8,42	Rp1.821,32	Rp60,71
3	Sumatera Barat	610941	335,21	5,92	Rp1.580,31	Rp52,68
4	Riau	605912	485,03	6,78	Rp1.955,63	Rp65,19
5	Jambi	545870	279,37	7,62	Rp1.864,14	Rp62,14
6	Sumatera Selatan	485069	1044,69	11,9	Rp1.511,78	Rp50,39
7	Bengkulu	590754	297,23	14,62	Rp1.517,62	Rp50,59
8	Lampung	514039	1002,41	11,57	Rp1.475,97	Rp49,20
9	Kepulauan Bangka Belitung	801437	66,78	4,45	Rp2.029,47	Rp67,65
10	Kepulauan Riau	684070	151,68	6,24	Rp2.315,16	Rp77,17

Source: Badan Pusat statistik Indonesia 2023

Table 1 shows that the poverty line in Riau Province cannot yet be categorized as favorable. The average daily income in Riau Province is still below the World Bank's standard for prosperity, which is \$25 per day per individual (World Bank, 2014). In terms of the percentage of poor population, Riau ranks seventh on Sumatra Island. Comparatively, the economic growth in Riau Province from 2021 to 2023 showed a favorable percentage, with an economic growth rate increase of 1.4% from the previous year (Databoks, 2024). Correspondingly, the poverty rate in Bengkalis Regency also shows a less than satisfactory figure when compared to its economic growth, as illustrated in Figure 1 below:



**Gambar 1**

Source: BPS Kabupaten bengkalis 2024

Figure 1 shows that while the GDP of Bengkalis Regency increased by 2.2%, this growth

was not accompanied by a reduction in the poverty rate. In terms of the ranking of the number of poor population by regency/city in Riau Province, Bengkalis Regency ranks seventh out of the 12 regencies with the highest number of poor residents (BPS RIAU, 2024). This ranking is still relatively high, indicating that the average daily income is still below the prosperity category. Previous studies have shown that poverty is caused by several factors. Research by Sulistiani & Najmudin, (2023) states that when per capita income increases, the number of poor people can decrease. This is because economic development in a region increases disposable income and good income distribution among the regions, thereby reducing poverty. Other research by Wulandari et al., (2019) yielded similar findings, showing that in the long term, per capita income can affect poverty levels. Furthermore, Wulandari et al., (2019) showed that the Human Development Index (HDI) has a negative impact on poverty, meaning that as the HDI increases, poverty levels decrease. Fajriah, (2021) argues that an increase in the Human Development Index reflects improvements in education, health, and living standards, which ultimately can reduce poverty. Additionally, Fajriah, (2021) also suggests that an increase in the minimum wage is expected to encourage improved welfare and productivity of the workforce, which in turn can reduce poverty. Other opinions state that an increase in per capita income and life expectancy has a negative and significant impact on poverty.

Based on the existing phenomena and discussions, this study will examine the influence of Gross Regional Domestic Product (GDP), Population Growth, Human Development Index (HDI), and Life Expectancy on poverty in Bengkalis Regency.

## **2. Literature Review**

### **Economic Growth Theory**

Economic growth theory is a concept in economics that explains how the economy of a country or region develops and increases over time. This theory encompasses various factors that influence economic growth, including capital accumulation, productivity improvement, technological innovation, and the enhancement of labor quality (Affandi & Astuti, 2013). One of the main objectives of economic growth theory is to understand the factors that can improve the standard of living and overall welfare of society. An increase in Gross Regional Domestic Product (GDP) typically reflects higher economic growth, which can create more jobs and increase community income. Studies indicate that an increase in per capita GDP has a negative and significant impact on poverty, meaning that an increase in GDP can reduce poverty levels. Economic growth theory explains that GDP, Human Development Index (HDI), minimum wage, and life expectancy index have significant impacts on poverty levels. A consistent increase in per capita GDP is associated with a reduction in poverty levels, as found in various studies showing that economic growth contributes to poverty reduction (Ngubane et al., 2023; Yuen et al., 2020). Furthermore, improvements in HDI, which encompass education, health, and living standards, play a crucial role in reducing poverty (Huang, 2024). Higher minimum wages can increase the income of low-income communities, thereby reducing poverty (Hakim & Sutrisni, 2020). A higher life expectancy index reflects better health conditions, which in turn can reduce poverty levels through increased productivity and reduced healthcare costs (Conglai & Chaofeng, 2018). Overall, the multidimensional approach in economic growth theory emphasizes the importance of these various factors in reducing poverty levels

### **Poverty**

Poverty is a multidimensional issue in development, encompassing various aspects of societal life such as social, economic, cultural, political, as well as spatial and temporal dimensions (Ginting & Rasbin, 2010). According to the World Bank, (2014) poverty is a condition where an individual or group has an income below the established standard ratio, which is \$2 per day. Assuming an exchange rate of Rp.15,000 per dollar, a person is considered to be in poverty if

they have an income of approximately Rp.30,000 per day. Poverty is defined as a condition where individuals or groups, regardless of gender, are unable to fulfill their basic rights to sustain and develop a decent life (Rifka et al., 2022). The causes of poverty include various factors, such as low human resources due to inadequate education, insufficient income and assets to meet basic needs, and limited job opportunities (Magee et al., 2013; Rifka et al., 2022). Poverty can also be categorized into several dimensions, such as social poverty experienced by women, children, and minority groups due to unfavorable social conditions, as well as poverty caused by globalization and uneven development. In Indonesia, poverty is influenced by many dimensions or variables, particularly social, psychological, and cultural variables (Ginting & Rasbin, 2010)

### **Produk Domestik Regional Bruto**

Gross Regional Domestic Product (GRDP) is the monetary value of all final goods and services produced by all production units within a specific region over a certain period, usually one year. GRDP reflects the total gross value added by all economic sectors operating in the region, regardless of whether the production factors are owned by residents of that region (Fajriah, 2021). GRDP represents the total value added generated by all business units in a specific region during a certain period, indicating the level of economic activity and economic welfare in that region. A significant increase in GRDP can reduce poverty through several mechanisms. Economic growth indicated by GRDP creates more job opportunities, increases household income, and reduces poverty (Akanbi, 2017). Growth in GRDP is often accompanied by increased investment in infrastructure, which improves access to basic services and economic opportunities (Akanbi, 2017). However, uneven income distribution can diminish the positive impact of GRDP on poverty, highlighting the importance of ensuring that economic growth is experienced by all segments of society. Therefore, while GRDP is an important indicator of the economic condition of a region, social factors and government policies also play a crucial role in determining its impact on poverty (Smythe et al., 2024)

Based on the above discussion, the first hypothesis is:

**H1: Gross Regional Domestic Product affects poverty in Bengkalis Regency**

### **Human Development Index**

The Human Development Index (HDI) is an indicator used to measure the quality of human development in a region. HDI encompasses three main dimensions: health (measured by life expectancy), education (measured by average years of schooling and expected years of schooling), and a decent standard of living (measured by Gross National Income per capita) (Mankiw, 2006; Sukirno, 1994; Syahidin et al., 2022). Penelitian menunjukkan bahwa indeks pembangunan manusia memiliki pengaruh signifikan terhadap berbagai aspek sosial dan ekonomi. Research indicates that the Human Development Index significantly impacts various social and economic aspects. An increase in HDI can reduce poverty and unemployment rates and boost economic growth (Wulandari et al., 2019). Studies by Sulistiani & Najmudin, (2023) show that investment, inflation, and HDI significantly influence economic growth, which ultimately reduces poverty. Improvements in HDI not only reflect an enhancement in the quality of life of the population but also contribute to broader economic stability and growth. Increased HDI demonstrates better health care, education, and living standards, which collectively foster a more productive and economically stable society, thus reducing poverty rates.

Based on the above discussion, the second hypothesis is:

**H2: The Human Development Index affects poverty in Bengkalis Regency**

### **Regional Minimum WageUpah minimum regional**

The Regional Minimum Wage (UMR) is the minimum standard used by employers or industry players to pay workers within a business or work environment. The minimum wage

policy in Indonesia is outlined in the Minister of Manpower Regulation Number: Per-01/Men/1999 and UU Ketenagakerjaan UU No.13, 2003. The minimum wage is the lowest monthly wage consisting of basic wage including fixed allowances. The establishment of the UMR aims to protect workers from exploitation by employers or companies and ensure they receive sufficient wages to meet their minimum living needs (KHM). When minimum living needs are met, society will be prosperous and free from poverty issues (Fajriah, 2021). Research by Fajriah, (2021) shows that the establishment of the RMW has a significant impact on the welfare and productivity of workers. In East Java, the increase in UMR is expected to encourage the improvement of workers' welfare and productivity. Over the past 11 years, the city of Surabaya has consistently had the highest RMW compared to other areas in East Java, as Surabaya is the provincial capital.

Based on the above discussion, the third hypothesis is:

**H3: The Regional Minimum Wage affects poverty in Bengkalis Regency**

### Life expectancy Index

Life expectancy is the estimated average number of years a person is expected to live from birth, based on current health conditions and socio-economic factors. The life expectancy index is a crucial indicator in assessing the quality of life and the overall well-being of a population. The influence of the life expectancy index on poverty is highly significant. Research shows that an increase in life expectancy often correlates with a reduction in poverty levels. This is due to several factors, including better access to healthcare services, education, and overall improvements in living standards. For instance, studies in Indonesia have demonstrated that good health and improved education can significantly reduce poverty (Tuharea et al., 2024). Furthermore, other research has found that multidimensional poverty explains variations in life expectancy better than income poverty, indicating that a more holistic approach to addressing poverty can enhance life expectancy (Tafran et al., 2020).

Based on the above discussion, the fourth hypothesis is:

**H4: The Life Expectancy Index affects poverty in Bengkalis Regency**

### 3. Research Methodology

This study utilizes secondary data, all of which is obtained from the Bengkalis Regency Statistics Agency (Badan Pusat Statistik) from 2013 to 2023. The analytical method used in this research is quantitative analysis using the Ordinary Least Squares (OLS) model. The dependent variable in this study is the poverty rate, while the independent variables are Gross Regional Domestic Product (GRDP), Human Development Index (HDI), Regional Minimum Wage (UMR), and Life Expectancy Index (LEI). This study relies on published data from the Bengkalis Regency Statistics Agency for the period from 2013 to 2023.

### 4. Results and Discussion

#### Multiple Linear Regression

Multiple linear regression analysis is used to determine the direction of the relationship between the independent and dependent variables. The results of the multiple linear regression analysis can be seen in Table 2:

**Table 2. Results of Multiple Linear Regression Analysis**

Dependent Variable: PVR
Method: Least Squares
Date: 06/08/24 Time: 14:01
Sample: 2013 2023
Included observations: 11

Variable	Coefficient	Std. Error	t-Statistic	Prob.
C	-31535.32	13479.18	-2.339558	0.0579
GDP	-3.91E-06	4.91E-06	-0.796415	0.4561
HDI	-4.593286	0.946381	-4.853528	0.0028
MW	0.000156	0.000101	1.545690	0.1731
LEI	9.622598	2.652460	3.627801	0.0110
R-squared	0.908968	Mean dependent var		3748.182
Adjusted R-squared	0.848280	S.D. dependent var		167.9767
S.E. of regression	65.42892	Akaike info criterion		11.50276
Sum squared resid	25685.66	Schwarz criterion		11.68362
Log likelihood	-58.26518	Hannan-Quinn criter.		11.38875
F-statistic	14.97777	Durbin-Watson stat		3.123716
Prob(F-statistic)	0.002811			

Given by:

GDP: Gross Domestic product

HDI: Human Development index

Mw: Minimum Wage

LEI: Life expectancy index

PVR: Poverty Rate

Based on the table above, the coefficient values of the independent variables are as follows: GDP is -3.91E-06, HDI is -4.593286, MW is 0.000156, and LEI is 9.622598, with the coefficient value of the dependent variable, PVR, being -31535.32. Thus, the regression equation is as follows:

$$Y = -31535.32 - 3.91E-06 * GDP - 4.593286 * HDI + 0.000156 * MW + 9.622598 * LEI$$

### Classical Assumption Test

#### Multicollinearity Test

The multicollinearity test is used to determine whether there is a relationship between the independent variables. Multicollinearity can be observed from the Variance Inflation Factors (VIF). VIF attempts to assess how much the variance of an estimator increases if multicollinearity exists in an empirical model. If the VIF of a variable exceeds 10, the variable is said to be highly correlated, indicating the presence of multicollinearity (Ghozali, 2011)

**Table 3. Result of Multicollinearity Test**

Variance Inflation Factors			
Date: 06/08/24 Time: 14:06			
Sample: 2013 2023			
Included observations: 11			
Variable	Coefficient Variance	Uncentered VIF	Centered VIF
C	1.82E+08	466852.7	NA
GDP	2.41E-11	3.346833	2.6932667034
HDI	0.895637	121691.8	2.8749599039
MW	1.02E-08	208.3929	1.4726520162
LEI	7.035546	909832.3	5.2700795995

Sumber data olahan eviews 2024

Based on Table 3, it is known that each variable in this study is free from multicollinearity, as the VIF values for each variable are greater than 0.1 and do not exceed 10

### Heteroskedasticity Test

The heteroskedasticity test aims to determine whether the variance of the residuals is constant by using the Obs\*R-squared method. The results of the heteroskedasticity assumption test are as follows:

**Table 3. Result of Heteroskedasticity Test**

Heteroskedasticity Test: Glejser			
Null hypothesis: Homoskedasticity			
F-statistic	1.393690	Prob. F(4,6)	0.3405
Obs*R-squared	5.297938	Prob. Chi-Square(4)	0.2581
Scaled explained SS	4.118588	Prob. Chi-Square(4)	0.3902

Source: Processed data from Eviews 2024

Based on the Obs\*R-squared test results, the value is greater than 0.05, specifically 5.297938, indicating that this study is free from heteroskedasticity.

### Autocorrelation Test

This test is conducted to determine whether a variable in the established model has a relationship with the predictive variable that is time-bound. The occurrence of autocorrelation results in the non-independence of disturbance pairs. Autocorrelation testing must be performed if the research uses time series data in linear regression testing. If the probability is above 0.05, the model is free from autocorrelation issues. To determine the presence of autocorrelation in this study, the Breusch-Godfrey Serial Correlation LM (Lagrange Multiplier) Test is conducted:

**Table 4. Result of Autocorrelation Test**

Breusch-Godfrey Serial Correlation LM Test:			
Null hypothesis: No serial correlation at up to 2 lags			
F-statistic	3.139148	Prob. F(2,4)	0.1515
Obs*R-squared	6.719135	Prob. Chi-Square(2)	0.0348
Test Equation:			
Dependent Variable: RESID			
Method: Least Squares			
Date: 06/08/24 Time: 14:02			
Sample: 2013 2023			
Included observations: 11			
Presample missing value lagged residuals set to zero.			
R-squared	0.610830	Mean dependent var	9.26E-12
Adjusted R-squared	0.027076	S.D. dependent var	50.68102
S.E. of regression	49.99019	Akaike info criterion	10.92266
Sum squared resid	9996.077	Schwarz criterion	11.17586
Log likelihood	-53.07461	Hannan-Quinn criter.	10.76305

F-statistic	1.046383	Durbin-Watson stat	2.218568
Prob(F-statistic)	0.506005		

Source: Processed data from Eviews 2024

Based on Table 4.4, it is known that the ObsR-squared value is greater than 0.05 and the Chi-Square probability value of ObsR-squared is 6.719135, which is also greater than 0.05. These results indicate that this study meets the criteria for the autocorrelation test(Gujarati, 2011)

## Statistical Test

### t-Test

The t-test is conducted to determine the effect of independent variables on the dependent variable. This can be seen from the estimation by comparing the t-table value with the t-statistic value. The test results can be seen in the following table:

**Table 5. t-Test Results**

Dependent Variable: PVR				
Method: Least Squares				
Date: 06/08/24 Time: 14:01				
Sample: 2013 2023				
Included observations: 11				
Variable	Coefficient	Std. Error	t-Statistic	Prob.
C	-31535.32	13479.18	-2.339558	0.0579
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MW	0.000156	0.000101	1.545690	0.1731
LEI	9.622598	2.652460	3.627801	0.0110

Sumber data olahan Eviews 2024

Given by:

*GDP: Gross Domestic product*

*HDI: Human Development index*

*Mw: Minimum Wage*

*LEI: Life expetacy index*

*PVR: Poverty Rate*

Based on Table 5, it is noted that the t-statistic value for GDP is -0.796415 with a probability value of 0.4561, which is greater than 0.05. This means that GDP does not have a significant effect on poverty in Bengkalis Regency. Next, the t-statistic value for HDI is -4.853528 with a probability value of 0.0028, which is less than 0.05, indicating that HDI significantly affects poverty in Bengkalis Regency. Furthermore, the t-statistic value for MW is 1.545690 with a probability value of 0.1731, which is greater than 0.05, indicating that the minimum wage does not significantly affect poverty in Bengkalis Regency. Lastly, the t-statistic value for LEI is 3.627801 with a probability value of 0.0110, which is less than 0.05, indicating that the Life Expectancy Index significantly affects poverty in Bengkalis Regency.

### F-Test

The F-Test is used to determine whether there is a significant effect of the independent variables simultaneously on the dependent variable by comparing the probability value of the F-statistic with the significance level of 0.05. In Table 1, it is shown that the calculated F value in this study is 0.002811, which is less than 0.05, indicating that the variables in this study meet

the criteria for the F-Test.

### **Coefficient of Determination ( $R^2$ )**

The  $R^2$  coefficient of determination test aims to determine how well the variation of the independent variables can explain the variation of the dependent variable. A perfect  $R^2$  value is one, which indicates that all variations in the dependent variable can be fully explained by the independent variables included in the model (Sugiono, 2012). The coefficient of determination can be measured using the R-square or Adjusted R-square value, which is used when there is only one independent variable (commonly referred to as Simple Linear Regression). The Adjusted R-square is used when there is more than one independent variable. If the obtained value approaches one, there is a strong relationship between the independent variables and the dependent variable (Henseler et al., 2015). Pada tabel 1 terlihat bahwa nilai *Adjusted R-Square bernilai* 0.848280 In Table 1, it is shown that the Adjusted R-square value is 0.848280, meaning that the independent variables Gross Regional Domestic Product (GDP), Human Development Index (HDI), Regional Minimum Wage (MW), and Life Expectancy Index (LEI) can explain 84% of the changes in the poverty variable.

### **Discussion**

#### **Gross Regional Domestic Product (GRDP) Does Not Affect Poverty Levels**

Gross Regional Domestic Product (GRDP) is often considered a primary indicator of the economic health of a region; however, an increase in GRDP does not always directly reduce poverty levels. The results of this study show that there is no significant impact of GRDP on poverty in Bengkalis Regency. This finding is consistent with other research indicating that an increase in GRDP does not always significantly reduce poverty. For instance, a report from the OECD suggests that despite economic growth, persistent income inequality can impede poverty reduction efforts. This means that uneven GRDP growth can benefit a small elite group without significantly impacting the poor population (Ourworldindata, 2021). Several studies have highlighted that factors such as unequal income distribution, non-inclusive economic growth, insufficient investment in the social sector, non-pro-poor economic policies, and limited trickle-down effects hinder the positive impact of GRDP on poverty reduction. Dollar, (2023) emphasizes that income inequality can negate the benefits of economic growth in reducing poverty. Ravallion, (2001) notes that non-inclusive growth often fails to create opportunities for all segments of society. Additionally, A.Sen, (1999) underlines the importance of investing in the social sector to improve the quality of life for the poor.

#### **Human Development Index Affects Poverty Levels**

The Human Development Index (HDI) significantly impacts poverty levels in Bengkalis Regency. The HDI is a measure designed to assess the quality of life in various countries, taking into account three main dimensions: health (measured by life expectancy), education (measured by average years of schooling and expected years of schooling), and a decent standard of living (measured by Gross National Income per capita). Research indicates that HDI has a significant influence on poverty levels (UNDP, 2023). UNDP, (2023) reveals that countries with higher HDI tend to have lower poverty rates. This is attributed to improvements in education, health, and income, which provide greater access to economic opportunities and enhance the quality of life. For example, the 2023 Global Multidimensional Poverty Index report shows that countries with significant increases in HDI also experience reductions in multidimensional poverty, encompassing various aspects such as education, health, and living conditions. Additionally, UNDP analysis suggests that improvements in HDI in countries with low and medium human development can substantially reduce the number of people living in extreme poverty. For instance, in the "SDG Push" scenario, which combines ambitious policies and investments, it is

estimated that approximately 100 million people in countries with low and medium HDI could be lifted out of extreme poverty by 2030 (Sdgingtegration, 2023).

### **Minimum Wage Does Not Affect Poverty Levels**

Upah minimum tidak berpengaruh terhadap tingkat kemiskinan di kabupaten bengkalis.

The minimum wage does not significantly impact poverty levels in Bengkalis Regency. Although raising the minimum wage is often viewed as a solution to reduce poverty, several studies suggest that its effects are not always significant. Some studies indicate that increasing the minimum wage can lead to undesirable outcomes such as reduced working hours, job losses, and an increase in unpaid work. Research by Neumark & William, (2017) shows that while raising the minimum wage tends to increase the income of some poor families, it also raises the likelihood that families previously not in poverty will fall into poverty. In some cases, the negative impacts of job losses and reduced working hours offset the benefits of wage increases for poor families. Additionally, Burkhauser et al., (2023) found that raising the minimum wage during a major recession resulted in significant declines in income growth and employment for low-skilled workers. This was due to an increased likelihood of unpaid work and reduced opportunities to accumulate work experience, ultimately hindering long-term income growth. Furthermore, research by Bharadwaj et al., (2014) shows that a 10 percent increase in the minimum wage is associated with a statistically insignificant long-term increase in the probability of poverty by 0.17 percent. The study also indicates that less than 10 percent of workers affected by the new federal minimum wage increase were members of poor families. Therefore, while the minimum wage policy aims to improve the welfare of low-income workers, its effectiveness in reducing poverty is limited and may even have counterproductive effects under certain circumstances

### **Life Expectancy Index Affects Poverty Levels**

Based on data analysis, the Life Expectancy Index significantly affects poverty levels in Bengkalis Regency. The Life Expectancy Index is significant because it reflects improvements in access to healthcare, education, and better nutrition, all of which contribute to enhanced quality of life and poverty reduction. Research shows that the global increase in life expectancy from 62.3 years in 1990 to 71.1 years in 2019 coincided with a significant decline in poverty levels during the same period (Dattani et al., 2021). The concept of Poverty-Adjusted Life Expectancy (PALE) demonstrates that simultaneous increases in life expectancy and reductions in poverty enhance overall societal well-being (marie, 2022). Investments in better healthcare and education enable individuals to be more productive and open up broader economic opportunities, thereby effectively reducing poverty (Dattani et al., 2021).

## **5. Conclusion**

Based on the results of the multiple linear regression analysis, it was found that Gross Regional Domestic Product (GDP) and Minimum Wage (MW) do not have a significant effect on poverty levels in Bengkalis Regency, with probability values of 0.4561 and 0.1731, respectively, which are greater than 0.05. Conversely, the Human Development Index (HDI) and Life Expectancy Index (LEI) show significant impacts on poverty levels, with probability values of 0.0028 and 0.0110, respectively, which are less than 0.05.

This analysis is supported by classical assumption tests, indicating that the data is free from issues of multicollinearity, heteroskedasticity, and autocorrelation, thereby ensuring the validity of the regression model used. Furthermore, the F-test shows that the independent variables simultaneously have a significant effect on the dependent variable, with an F-statistic probability value of 0.002811. The coefficient of determination ( $R^2$ ) of 0.848280 indicates that the variables GDP, HDI, MW, and LEI can explain 84% of the variation in poverty levels. These

results highlight the importance of focusing on improving HDI and LEI to effectively reduce poverty in Bengkalis Regency.

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