

# A Study on the Impact of Inflation, Poverty, and Unemployment on Income Inequality at Cermin Beach, Serdang Bedagai Regency

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## ABSTRACT

One of the causes of income inequality is the large number of poor and unemployed people. The relationship among inflation, poverty, unemployment, and income inequality demonstrates a continuous interaction of these factors. This study aims to determine the effects of inflation, poverty, and unemployment on income inequality in Serdang Bedagai Regency, specifically at Cermin Beach. Secondary data from the Central Statistics Agency (BPS) covering the period from 2019 to 2023 was utilized. The research employed a quantitative analytical method using SPSS 26.0 for data analysis. The research findings indicate that inflation significantly impacts income inequality. Poverty, however, does not show a significant effect on income inequality, whereas unemployment does. Collectively, inflation, poverty, and unemployment variables significantly affect income inequality in Cermin Beach, Serdang Bedagai Regency.

## ABSTRAK

Salah satu penyebab ketimpangan pendapatan adalah jumlah besar penduduk miskin dan pengangguran. Hubungan antara inflasi, kemiskinan, pengangguran, dan ketimpangan pendapatan menunjukkan interaksi yang terus-menerus antara faktor-faktor tersebut. Penelitian ini bertujuan untuk menentukan pengaruh inflasi, kemiskinan, dan pengangguran terhadap ketimpangan pendapatan di Kabupaten Serdang Bedagai, khususnya di Pantai Cermin. Data sekunder dari Badan Pusat Statistik (BPS) periode 2019-2023 digunakan dalam penelitian ini. Metode analisis kuantitatif yang digunakan adalah SPSS 26.0. Hasil penelitian menunjukkan bahwa inflasi berdampak signifikan terhadap ketimpangan pendapatan. Namun, kemiskinan tidak berpengaruh signifikan terhadap ketimpangan pendapatan, sedangkan pengangguran berdampak signifikan. Secara bersama-sama, variabel inflasi, kemiskinan, dan pengangguran berpengaruh signifikan terhadap ketimpangan pendapatan di Pantai Cermin, Kabupaten Serdang Bedagai.



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## INTRODUCTION

According to Todaro (2017), income distribution is measured using two main criteria: personal income distribution and functional distribution, which view individuals as distinct entities. Personal income distribution describes how income is received across the population, with 40% receiving the lowest income, 40% receiving a middle income, and 20% receiving the highest income. Poverty refers to the inability to meet basic societal needs. This indicates that the Indonesian government has not fully addressed this issue but has reduced the number of poor and alleviated their suffering to some extent. From a religious perspective, the distinction is clear.

In Islam, there is a clear differentiation between the poor and the destitute. The poor are those unable to meet their basic needs, while the destitute are those who have the potential to meet their daily needs but are unable to realize it.

Unemployment refers to a segment of the workforce that has not engaged in money-generating activities. According to Sadono Sukirno, unemployment includes individuals actively seeking employment at a specific wage level but unable to secure desired jobs. Unemployment often stems from insufficient aggregate expenditure. Entrepreneurs profit from selling goods and services, with demand determining the workforce size required. Unemployment is a macroeconomic issue directly impacting individuals' livelihoods. Job loss often leads to reduced living standards for many. Consequently, political figures propose policies aimed at job creation (Mankiw, 2016). The link between unemployment and poverty is strong. Communities with high employment tend to enjoy better welfare, while unemployment can lead to income loss that hinders daily needs. Moreover, unemployment among low-income groups, especially those slightly below the poverty line, exacerbates poverty rates. Thus, higher unemployment levels generally correlate with increased poverty.

Income inequality refers to uneven distribution of income among different groups within a region. The level of income inequality is typically measured using the Gini index, which ranges from 0 to 1. This index quantifies the degree of income distribution equality or inequality in an area. A smaller Gini coefficient (closer to 0) indicates more equal income distribution, while a larger coefficient (closer to 1) signifies greater inequality. A coefficient of 0 represents perfect income equality, whereas a coefficient of 1 signifies perfect income inequality. Income distribution inequality between high-income and low-income communities is a significant issue faced by developing countries. According to Oxfam (2017), Indonesia ranks among the countries with the most severe income inequality globally, where the wealth of the four richest individuals equals that of 100 million poor people in the country. Therefore, income distribution inequality is a major issue that cannot be overlooked. While inequality cannot be entirely eradicated, it can be mitigated to a level acceptable within a particular system, thereby fostering harmony in its growth process (Supriyantoro, 2018).

Throughout history, humans have employed various methods to address the economic challenges they encounter. Societies and states tackle these fundamental economic issues through centralized power and control, as well as through competitive economies utilizing price and market systems. In comparison to other districts, Serdang Bedagai District exhibits unstable levels of economic growth, poverty, and unemployment. This is evident in statistical reports from the District Central Statistics Agency (BPS), as shown in the following table.

**Table 1** *Inflation, poverty, unemployment, and income inequality in Kec. Cermin Beach, Kab. Serdang Bedagai (%)*

Year	Inflation	Level Poverty	Unemployment	Gini Ratio (InequalityIncome)
2017	2.01	8.42	5.48	0.39
2018	2.45	7.99	6.56	0.38
2019	1.55	8.22	7.83	0.38
2020	1.96	7.98	7.43	0.37
2021	2.14	8.51	6.22	0.38
2022	2.01	7.65	6.26	0.39
2023	2.99	7.91	5.57	0.36

Based on data published by the Central Statistics Agency (BPS), inflation in Serdang Bedagai Regency fluctuated between 2017 and 2023. In 2017, it was 2.01%. It decreased to 1.55% in 2019, then rose again to 1.96% in 2020, 2.14% in 2021, decreased to 2.01% in 2022, and reached its highest at 2.99% in 2023. The percentage of people living in poverty in Serdang Bedagai Regency also varied from 2017 to 2023. It was 8.42% in 2017, decreased to 7.99% in 2018, 8.22% in 2019, and 7.98% in 2020, but increased to 8.51% in 2021. It then decreased to 7.65% in 2022 and rose again to 8.5% in 2023. The unemployment rate in Serdang Bedagai Regency followed a similar pattern, starting at 5.48% in 2017, increasing to 6.56% in 2018, 7.83% in 2019, and 7.43% in 2020. It then decreased to 6.22% in 2021, 6.26% in 2022, and 5.57% in 2023. The Gini Ratio (income inequality) in Serdang Bedagai Regency fluctuated as well, starting at 0.39% in 2016, decreasing to 0.38% in 2018 and 2019, and further to 0.37% in 2020. It increased again to 0.38% in 2021 and 2022, then decreased to 0.36% in 2023.

Globally, every country aims to improve the standard of living and welfare of its people through economic development. Income distribution inequality between high-income and low-income communities remains a significant challenge faced by developing countries. According to Oxfam (2017), Indonesia exhibits severe income inequality, where the assets of the four richest individuals equal those of 100 million poor people in the country. Addressing income inequality is crucial for maintaining harmony and fostering growth within a system. The relationship between unemployment and poverty is closely intertwined. Gainful employment contributes to community welfare, whereas unemployment can lead to decreased income and increased poverty, particularly among low-income groups. This underscores the importance of addressing unemployment to mitigate its impact on poverty levels. So, given this context, the author proposes a research study titled "The Influence of Inflation, Poverty, and Unemployment on Income Inequality in Kec. Cermin Beach, Kab. Serdang Bedagai.

## LITERATURE REVIEW

### *Income Inequality*

Inequality encompasses a broader scope than poverty, as it measures disparities across a large population rather than solely focusing on those below the poverty line (Khandker, Koolwal, & Samad, 2017). Inequality is assessed not just by average distribution but also through various other dimensions. According to Khandker, Koolwal, & Samad (2018), one straightforward method to gauge inequality is by dividing the population into fifths (quintiles) from the poorest to the richest, and observing the proportion of income (or expenditure) increasing at each level. If society prioritizes solely economic growth measured by GRDP, the optimal strategy may involve maximizing income inequality. Conversely, aiming for equal income distribution could potentially slow down economic growth. From this perspective, income inequality refers to the disparity in income levels among communities or regions, contributing to significant gaps between societal groups where the affluent grow wealthier while the less privileged face worsening conditions.

Various indicators are employed to measure income distribution equality, as outlined by Todaro and Smith (2018), including the Gini coefficient. This coefficient quantifies aggregate inequality on a scale from zero (perfect equality) to one (perfect inequality). In practice, countries with high inequality typically exhibit Gini coefficients ranging from 0.50 to 0.70, whereas those with relatively equal income distribution range from 0.20 to 0.35.

### **Factors Influencing Income Inequality Between Regions**

#### **1. Differences in Natural Resource Endowment**

Disparities in natural resource endowment affect production capabilities in respective regions. Areas abundant in natural resources can produce certain goods at lower costs compared to regions with fewer resources. This disparity accelerates economic growth in resource-rich regions and conversely impacts others.

#### **2. Variations in Demographic Conditions**

Demographic differences encompass growth rates, population structures, educational and health levels, employment conditions, and cultural work ethics. Regions with favorable demographic conditions tend to exhibit higher productivity, fostering increased investment, job creation, and regional economic expansion.

#### **3. Limited Mobility of Goods and Services**

Effective mobility of goods and services involves inter-regional trade and migration, whether sponsored by governments or occurring spontaneously. Inadequate mobility prevents surplus production from reaching regions in need, exacerbating development disparities. This hindrance complicates efforts for underdeveloped regions to stimulate growth (Jhingan, 2014).

## ***Inflation***

Inflation is a phenomenon where the general price level experiences a continuous increase. An increase in the prices of just one or two goods cannot be called inflation, unless the increase extends to (or results in an increase in) most of the prices of other goods (Boediono, 2017). Inflation is an increase in commodity prices in general caused by a lack of synchronization between commodity procurement programs (production, pricing, printing money, etc.) and the level of income owned by the community (Putong, 2018).

## ***Poverty***

Poverty imposes constraints on individuals, families, communities, and even entire countries, leading to hardships in life, undermining law enforcement and justice, and jeopardizing future generations and national prospects (Aziz, Rochaida, & Warsilan, 2016). It encompasses both material deprivation and the lack of intangible benefits. Poverty is further defined by the absence of assets such as land, housing, financial resources, and other valuables (Latumaerissa, 2017). Social inequality and injustice arise from poverty, limiting access for the poor to quality education and healthcare services. Poverty is often concentrated in remote and marginalized areas distant from governmental centers. In these regions, impoverished populations face challenges in pursuing education, employment opportunities, healthcare, and basic necessities. Poverty is a multifaceted issue influenced by various factors, including individual circumstances, inheritance, and external factors such as environmental conditions and governmental policies (Maipita, 2019).

## ***Unemployment***

In the course of economic development in developing countries, the rising number of unemployed individuals exacerbates issues, particularly following a less favorable income distribution among low-income groups. Current conditions attest that economic growth fails to generate job opportunities at a pace faster than population growth. High unemployment rates diminish overall social welfare. Expanding employment opportunities not only encourages greater workforce participation and income generation but also enhances welfare for more individuals (Gujarati, 2009). According to the Central Bureau of Statistics, unemployment refers to residents classified in the labor force who lack employment, actively seek work or prepare for self-employment, work less than two days a week, are discouraged job seekers, or possess a job but have yet to commence work. Imbalances in the labor market often underpin unemployment, with labor supply perpetually outstripping demand.

Four types based on its characteristics of unemployment, as outlined by Sukirno (2016):

### **1. Open Unemployment**

This type arises due to an imbalance between the increasing number of job seekers and the availability of jobs. It includes individuals in the labor force who do not have a job, are actively seeking work, or have a job offer but have not yet started working.

### **2. Hidden Unemployment**

This occurs in economic sectors where the number of workers exceeds the necessary workforce, resulting in zero or very low marginal productivity. Even if



employed, these workers do not contribute significantly to increasing production levels.

**3. Seasonal Unemployment**

This type occurs during specific times of the year, such as in agricultural, animal husbandry, or plantation sectors, which require labor only during certain seasons. Production activities decrease during other times of the year.

**4. Underemployment**

This type occurs when individuals work less than full-time hours (typically less than 35 hours per week) due to a lack of available full-time employment opportunities.

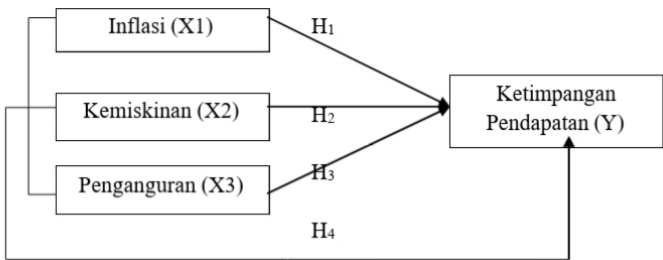
**RESEARCH METHOD**

This research employs quantitative data, specifically panel data spanning from 2019 to 2023. Panel data combines time series data over this period. The study encompasses a total population of 60. The primary focus is to determine the extent of impact that independent variables have on the dependent variable, which in this case is income inequality. The independent variables—namely inflation, poverty, and unemployment—serve as explanatory factors.

The research aims to assess the influence of inflation, poverty, and unemployment on income inequality specifically within the district of Cermin Beach, Kab. Serdang Bedagai. Data for this study were collected from 2020 to 2023. This timeframe was selected based on the assumption that during these years, the independent variables would provide accurate insights into their effects on the dependent variable. Additionally, the choice of this period considers data availability factors.

A hypothesis is a temporary answer to a research problem until it is proven through processing the collected data. Based on theory and literature review, as well as previous related research, in this research the hypothesis used is as follows. H1: inflation influences income inequality; H2: poverty influences income inequality; H3: unemployment influences income inequality; H4: inflation, poverty and unemployment simultaneously influence income inequality.

To facilitate this research, a research model was designed to explore the relationship between the independent variables and the dependent variable. This study aims to examine how inflation, poverty, and unemployment variables influence income inequality. These three independent variables are expected to affect income inequality either individually or collectively, with 'e' representing the standard error in estimation. The following illustrates the research model design to be employed in this study.



*Figure 1 Framework*

## RESULTS and DISCUSSION

### Descriptive statistics

These descriptive statistics provide an overview of data that can be seen from the average (mean), standard deviation, variance, maximum, minimum, sum, range, kurtosis and skewness (distribution differences).

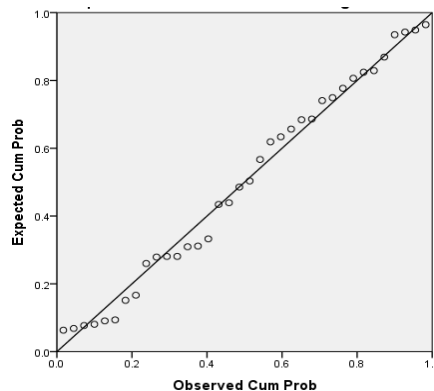
**Table 2** Descriptive Analysis Descriptive Statistics

	N	Range	Minimum	Maximum	Mean	Std. Deviation
inflation	60	34.96	27.82	62.78	41.3671	8.87751
poverty	60	34.92	59.84	94.76	78.5027	11.19444
unemployment	60	50.65	45.67	96.32	79.0258	13.61794
Valid N (listwise)	60					

### Classic assumption test

#### a. normality test

The normality test aims to test whether the regression model for confounding or residual variables has a normal distribution. To detect whether the values from the results of the histogram tester and p-plot tester are normal, and more details can be seen using Kolmogorow-Smirnov. It is said to meet normality if the resulting residual value is greater than 0.05.



**Figure 2** Normalized PP Plot Regression Test Results Standardized

Based on Figure 2 above, it can be seen that the points formed are spread around the diagonal line on the p-plot curve, thus the data in this study is normally distributed.

**Table 3** Kolmogorov Normality Tests

One-Sample Kolmogorov-Smirnov Test		
		Unstandardized Residual
N		60
	Mean	0E-7
Normal Parameters <sup>a, b</sup>	Std.	8475.3458470
	Deviation	1
	Absolute	.108

Most Extreme eDifferences	Positive	.108
	Negative	-.061
Kolmogorov-Smirnov Z		,686
Asymp. Sig. (2-tailed)		,735
a. Test distribution is Normal		
b. Calculated from data		

Based on table 3, it can be seen that the significant value (Asymp. Sig. (2-tailed) is 0.735. So it can be concluded that the data is normally distributed.

#### *b. autocorrelation test*

To streamline this research, a model was designed to explore the relationship between independent variables and the dependent variable. The study aims to investigate how inflation, poverty, and unemployment influence income inequality. These three independent variables are expected to affect income inequality individually or collectively, with 'e' representing the standard error in estimation. The research model outlined will guide the examination of these relationships within the context of Cermin Beach District, Kab. Serdang Bedagai, from 2020 to 2023, considering the availability and accuracy of data during this period

**Table 4** *Autocorrelation Test Results*

Model Summary b					
Model	R	R Square	Adjusted RSquare	Std. Error of the Estimate	Durbin-Watson
1	.471 <sup>a</sup>	,222	,171	3,600	2,211

a. Predictors: (Constant), inflation, poverty, unemployment

b. Dependent Variable: Income Inequality

Based on table 1.3 above, the DW (Durbin Watson) value is 2.211. The results of the autocorrelation test indicate that the DW value (d) falls between the upper limit (dU) and 4 - dU, where dU is calculated as 11.673. Specifically, the DW value of 2.211 is less than 2.127 (which is 4 - dU). This suggests that there are no signs of autocorrelation.

### **Hypothesis Test Result**

The partial t-test primarily indicates the extent to which an explanatory/independent variable individually explains variations in the dependent variable being tested at the 0.05 significance level. It assesses the statistical significance of each independent variable's contribution to the model. Meanwhile, the F statistical test evaluates whether there is a simultaneous influence of the independent variables (such as inflation, poverty, and unemployment) on the dependent variable (income inequality). This test determines the overall significance of the model's explanatory power, considering all variables together at the 0.05 significance level. Together, these tests provide insights into both the individual and collective impacts of the independent variables on the dependent variable. The following table presents the results of the test:



**Table 5** *Partial and Simultaneous Test Result*

Coefficients <sup>a</sup>					
Model	Unstandardized Coefficients	Standardized Coefficients		Q	Sig.
	B	Std. Error	Beta		
(Constant)	30.755	18.657		1.667	.077
Inflation	.656	.322	.344	2.120	.013
1Poverty	.289	.111	.112	1.765	.276
Unemployment	.343	.221	.103	1.872	.011
Dependent Variable: Income Inequality					
ANOVA <sup>a</sup>					
Model	Sum of Squares	df	Mean Square	F	Sig.
Regression	1354.764	2	677.454	5.766 <sub>b</sub>	.021
1Residual	4476.216	34	765.541		
Total	8142.222	36			
Dependent Variable: income_inequality					
Predictors: (Constant), inflation, poverty, unemployment					

Based on table above, the results of hypothesis testing via the t-test are as follows:

1. **Inflation:** The t-test results indicate a significant value (sig) for the influence of inflation.
2. **Poverty:** The t-test results indicate a insignificant value (sig) for the influence of poverty.
3. **Unemployment:** The t-test results indicate a significant value (sig) for the influence of unemployment.

Meanwhile, based on table above, it is observed that the significance value (sig) for the influence of the independent variables on the dependent variable is 0.021 lower than 0.05. Additionally, the F-test results show an  $F_{\text{result}}$  value of 5.766, which is greater than the  $F_{\text{table}}$  value (2.18). Therefore, it can be concluded that inflation, poverty, and unemployment collectively exert a significant influence on income inequality.

## DISCUSSION

### *The Effect of Inflation on Income Inequality in Kec. Cermin Beach, Kab. Serdang Bedagai*

Partial inflation also influences income inequality in the district. Cermin Beach, Kab. Serdang Bedagai. The results of this research are in line with the theory put forward by Mankiw (2018), when the inflation rate is rolling and the value of the real currency fluctuates very large, the rising inflation will in turn be followed by an increase in the poverty line as a result of the increase in the inflation rate which will encourage an increase in the number of poor people if it is not followed by an increase in purchasing power or inequality in people's income, especially low-income groups. The results of this research are also in line with research conducted by "Sri Wahyuni, (2022)" with the title "The Influence of Inflation, Population and Economic Growth on Income Inequality in Aceh Province". The results of

the research show that "inflation has a positive effect on income inequality in Aceh Province." Growth will only reduce income inequality in Aceh province which will decrease.

***The Influence of Poverty on Income Inequality in the District. Cermin Beach, Kab. Serdang Bedagai***

Based on the results of the regression research, it was found that the poverty variable had no effect on income inequality. This means that if the poverty rate increases, it will not reduce the income inequality rate in the district. Pamtai Cermin, Kab. Serdang Bedagai. This research is not in line with research conducted by Syahri and Gustiara, (2020) where poverty has a significant influence on income inequality, if poverty increases by one percent it will increase income inequality. The Gini ratio value for North Sumatra still shows low income inequality. The distribution of expenditure for the population of North Sumatra 40 and under is still in the low inequality category.

***The Influence of Unemployment on Income Inequality in the District. Cermin Beach, Kab. Serdang Bedagai***

Based on the results of the partial test, it is concluded that unemployment significantly influences income inequality. This implies that higher unemployment rates in Cermin Beach District lead to increased income inequality. These findings align with the views expressed by Sukirno (2018), who argues that higher unemployment reduces the income of low-wage workers, thereby exacerbating income inequality. Moreover, this research corroborates previous studies indicating a positive relationship between unemployment and income inequality (Ali, 2018; Ansari Samani & Khilkordi, 2019; Catur Saputra, 2016; Masruri, 2016; Senol & Orhan, 2021; Syahryar et al., 2020). However, it contrasts with research suggesting a negative impact of unemployment on income inequality, as argued by Ersyad (2021), Fatsabit & Yusran (2019), and Kurnia Ardin (2017).

Based on these findings, it is evident that unemployment is a significant factor influencing income inequality. Data from the Madura Island Industry and Manpower Service (2021) indicates fluctuating and increasing unemployment rates on Madura Island, reflecting low welfare and income levels in Cermin Beach District (Sjafrizal, 2019). The level of income distribution in any area hinges on the scale of unemployment. A shortage of job opportunities complicates employment prospects, perpetuating rising unemployment rates and exacerbating income inequality (Sjafrizal, 2019).

Therefore, the Serdang Bedagai Government must create more job opportunities, as regional development is strategically targeted. It is crucial to enhance the quality of Human Resources (HR) by providing timely and accurate information about job vacancies to the community. Moreover, attracting numerous investors will stimulate economic growth in Serdang Bedagai District. To enhance human resources quality, efforts should focus on developing competencies (skills, knowledge, and attitude) among workers to increase their competitiveness and broaden job opportunities. Establishing a robust workforce education and training system can effectively address gaps in an economic environment characterized by surplus labor. This can be achieved by optimizing the role of Job Training Centers to equip job seekers with skills that align with current market demands.

## CONCLUSIONS

Based on the results of this research, it is concluded that inflation, poverty, and unemployment individually partially influence income inequality in Cermin Beach District, Kab. Serdang Bedagai. Moreover, collectively, inflation, poverty, and unemployment simultaneously exert an influence on income inequality in the district. For the Serdang Bedagai Government, addressing unemployment requires creating more job opportunities as a strategic goal of regional development. It is essential to enhance the quality of Human Resources (HR), disseminate timely and accurate information about job vacancies, and attract a diverse range of investors to foster economic growth in Serdang Bedagai. Furthermore, future research could explore additional variables such as investment, regional minimum wages, or other factors influencing income inequality. This would enrich the understanding and provide comprehensive insights for future studies.

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