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Research Article

The Effect of Open Unemployment Rate and Labor Force Participation Rate on Poverty Levels in Samosir Regency in 2010–2023

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Abstract

This study examines the influence of open unemployment and labor force participation rates on poverty levels in Samosir Regency from 2010 to 2023. Poverty is still a major development problem, especially in areas with limited access to jobs and productive resources. The aim of this study was to see if fluctuations in unemployment and labour force participation significantly affected poverty in the area. This study uses a quantitative method using secondary data from the Central Statistics Agency. The multiple linear regression used serves to analyze whether there is a relationship in each variable. The results showed that neither open unemployment nor labor force participation rate had a significant influence partially or simultaneously on poverty in Samosir Regency during the observation period. An adjusted R-squared value of 0.058 indicates that only 5.8% of the poverty variation can be explained by the two independent variables. Although unemployment and labor force participation fluctuate, poverty rates in general decline. These findings suggest that other factors, such as education, infrastructure, and economic diversification, may play a more significant role in poverty alleviation. Therefore, policy recommendations should focus not only on employment-related issues but also on broader socioeconomic interventions that address the root causes of poverty. Further research is needed to explore additional variables and develop integrated strategies for sustainable poverty alleviation.

INTRODUCTION

Poverty is still a crucial problem in regional economic development, especially in developing areas such as Samosir Regency. Poverty not only reflects limited income, but also reflects people's limited access to productive resources, education, health, and employment. Therefore, understanding the factors that cause poverty is an important part of efforts to develop targeted development strategies. In the context of regional development, poverty is an indicator of social welfare that must be examined in depth because it is directly related to the quality of life of the population. Economic factors have a big role in creating and reducing poverty rates, one of which is the employment problem. The availability of jobs that are quite limited and not equal to the growth rate of the labor force can lead to an increase in the unemployment rate, which ultimately has an

impact on the increase in poverty rates. In this case, the Open Unemployment Rate (TPT) is an important indicator that shows how large the proportion of workers who have not been absorbed into the world of work is. According to Todaro and Smith (2021), high unemployment indicates an imbalance between labor demand and supply, and is the root of reduced household income, which has a direct impact on increasing poverty rates. The Open Unemployment Rate shows the extent of the productive age population who are already actively looking for work but have not yet found a job. In areas such as Samosir Regency, unemployment can arise due to the lack of industrial sectors and limited formal sectors that are able to absorb labor. In addition, the quality of the workforce that is not optimal is also the cause of difficulty in accessing decent work. Prolonged unemployment not only impacts the economic conditions of individuals, but also has a structural impact on overall poverty levels. Therefore, reducing the unemployment rate is an important step in efforts to improve the level of people's welfare. In addition to unemployment, another factor that also affects the poverty rate is the Labor Force Participation Rate (TPAK), which reflects the level of involvement of the working-age population in economic activities. The higher the TPAK, the greater the number of people who are actively involved in economic activities, both as workers and job seekers. According to Simanjuntak (2019), a high TPAK can be a positive indication of labor market dynamics, as it shows that people have the will and opportunity to work, which indirectly impacts increasing household income and reducing poverty. However, high TPAK must also be balanced with the availability of adequate jobs so as not to cause hidden unemployment or semi-unemployment. Fluctuations in TPT and TPAK in an area can provide an overview of economic resilience and development inequality. Samosir Regency, which is one of the districts in North Sumatra Province, has economic characteristics that are still dominated by primary sectors such as agriculture and tourism. This condition makes the employment structure in the region vulnerable to seasonal fluctuations and limited access to formal employment. In the period from 2010 to 2023, data shows that there are significant dynamics in the unemployment rate and labor force participation, while the poverty rate tends to decrease. This raises an important question: do changes to TPT and TPAK really affect the poverty rate in the region. To get a clearer picture, the following is presented data on the development of the Open Unemployment Rate, Labor Force Participation Rate, and Poverty Level in Samosir Regency in the form of tables and graphs.

Table 1
Data on Poverty Levels, TPT, and TPAK in Samosir Regency (2010–2023)

| Year | Open Unemployment Rate (%) | Labor Force Participation Rate (%) | Poverty Level (%) |
|-------------|---|---|------------------------------|
| 2010 | 0,55 | 93,32 | 16,51 |
| 2011 | 2,26 | 75,01 | 15,67 |
| 2012 | 1,31 | 89,44 | 15,17 |
| 2013 | 1,12 | 89,02 | 14,01 |
| 2014 | 1,05 | 89,92 | 13,20 |
| 2015 | 1,28 | 88,38 | 14,11 |
| 2016 | 1,26 | 88,87 | 14,40 |
| 2017 | 1,28 | 88,87 | 14,72 |
| 2018 | 1,35 | 82,78 | 13,38 |
| 2019 | 1,25 | 81,58 | 12,52 |
| 2020 | 1,20 | 52,17 | 12,48 |
| 2021 | 0,70 | 84,38 | 12,68 |
| 2022 | 1,16 | 83,57 | 11,77 |
| 2023 | 1,03 | 86,89 | 11,66 |



Graph 1
Trends in Poverty Levels, TPT and TPAK in Samosir Regency (2010–2023)

Based on the data displayed, it can be seen that the Poverty Level in Samosir Regency tends to decrease from 2010 to 2023, although fluctuations still occur in certain years. Meanwhile, the Open Unemployment Rate shows a relatively stable trend with a relatively low percentage, although it had increased in 2011. On the other hand, the Labor Force Participation Rate experienced a sharp decline in 2020, which was most likely influenced by the impact of the COVID-19 pandemic, but increased again in the following years. These three variables show that the dynamics of employment and the welfare of the Samosir people are interrelated, so it is important to further research the relationship between these variables. Based on this description, it can be concluded that the purpose of the study is to find out and analyze the influence of the Open Unemployment Rate and the Labor Force Participation Rate on the Poverty Level in Samosir Regency in 2010–2023. This research is expected to be able to make a good contribution to the formulation of more effective and data-based employment policies and poverty alleviation

Hypotheses Development

1. Open Unemployment Rate (TPT)

The Open Unemployment Rate (TPT) is an indicator that can measure the percentage of the population in the labor force who do not have a job but are actively looking for work. TPT is often used to evaluate how effective an area is in providing employment for the working-age population. According to research by Abimanyu et al. (2024), high TPT can be an indicator of an imbalance between job availability and the number of job seekers. This imbalance can be caused by various factors such as skills mismatch, limited investment in labor-intensive sectors, and lack of access to job vacancy information. The impact of TPT is not only tangible in economic stagnation but also has a domino effect on the quality of life of the population. High unemployment leads to a decrease in purchasing power, economic dependence, and increases the potential for social conflict. Research by Rahayu and Syafruddin (2022) shows that areas with high TPT tend to have high poverty rates as well, because people do not have a stable source of income. In addition, long-term unemployment also disrupts the psychological stability and productivity of the community. Theoretically, open unemployment can be studied through Keynesian theory which states that unemployment is caused by a lack of aggregate demand. Meanwhile, Classical theory sees unemployment as a result of wage imbalances. A study by Simatupang and Hutapea (2023) confirms that in Indonesia, the main cause of TPT is regional development inequality and the concentration of employment in big cities, which causes areas such as disadvantaged districts to experience a lack of job opportunities. Therefore, the solution to unemployment must involve improving the skills of the workforce as well as equitable distribution of investment.

2. Labour Force Participation Rate (TPAK)

The Labor Force Participation Rate (TPAK) is an indicator that measures the proportion of the working-age population participating in the labor market, both those who are working and those who are in the process of looking for work. TPAK shows how much the productive age population is involved in economic activities. The higher the TPAK figure, the greater the potential of the regions in driving economic growth. A study from Ardiansyah and Fitriani (2021) shows that TPAK contributes significantly to economic growth in several provinces in Indonesia, especially those with an active informal sector. However, the high TPAK does not necessarily reflect ideal economic conditions. If TPAK increases but employment does not increase proportionally, there will be a surge in open unemployment. Research by Rahmah and Susanto (2020) found that fluctuations in TPAK are not always linear with labor absorption, especially in rural areas that depend on

the seasonal agricultural sector. Therefore, TPAK also needs to be analyzed together with other indicators such as employment structure, the quality of workforce education, and the level of urbanization. Educational, gender, and cultural factors also affect the TPAK figure. Areas with low education and patriarchal cultural dominance tend to have low female TPAK. Research by Sari and Gunawan (2020) confirms that the participation gap between men and women is still high in some regions of Indonesia, although there has been improvement nationally. Therefore, policies to increase TPAK must be accompanied by a gender-based approach, skills training, and expanded access to employment in inclusive sectors.

3. Poverty Rate

Poverty is a condition in which a person can be said to be incapable of meeting the basic needs of life properly. The poverty rate is an important indicator in assessing the success of economic development. A study by Feriyanto et al. (2020) revealed that poverty in Indonesia is not only caused by low income, but can also be caused by limited public access to education, health services, and decent work. The high inequality of development between regions also exacerbates this condition, so that poverty is multidimensional. The causes of poverty are also closely related to low productivity and labor quality. When many people work in the informal sector with low incomes, they will remain in the poverty trap despite working. Research by Anora et al. (2024) shows that areas that do not have adequate economic and educational infrastructure support tend to experience stagnation in reducing poverty rates. Therefore, poverty alleviation is not enough with cash assistance alone, but requires a structural approach and sustainable development. In a theoretical approach, Lewis's theory of economic dualism explains that the poor are in the traditional sectors that have low productivity. Without a transition to the modern sector, they will remain trapped in poverty. A study from Wahyuni and Prasetyo (2022) said that the government's efforts in social protection and community empowerment programs have not been evenly distributed. Therefore, poverty reduction strategies need to involve cross-sector collaboration and local economic empowerment based on regional potential.

4. The Relationship between TPT, TPAK, and Poverty

TPT, TPAK, and poverty are closely related in the dynamics of regional economic development. The high TPAK will have a positive impact if it is accompanied by labor absorption, but if jobs are not available, TPT will increase. Increasing TPT will lead to an increase in poverty because more and more people have no income. Research by Muttaqin and Anwar (2023) shows that the combination of high TPT and low economic growth is the main cause of stagnation in poverty rates in various regions of Indonesia. Theoretically, the relationship between these three variables can be explained through the theory of economic causality. When labor force participation increases, but is not accompanied by job creation, there will be pressure on the labor market. This exacerbates unemployment and directly increases the number of poor people. A study by Nasution and Ramadhani (2021) emphasizes the importance of integrative policies that are able to link education, job training, and the creation of independent businesses to break the cycle of poverty. The linkage between TPT, TPAK, and poverty is also influenced by external factors such as inflation, fiscal policy, and global economic turmoil. Research by Mulyani and Harahap (2023) found that regions with development strategies based on local potential and economic innovation tend to be able to reduce TPT and improve community welfare simultaneously. Therefore, government policies must pay attention to the synergy between the employment sector and poverty alleviation through integrated and evidence-based programs

METHOD

This study applies a quantitative approach as a research method using secondary time series data from 2010 to 2023 from the Central Statistics Agency (BPS) of Samosir Regency. This study utilizes multiple linear regression analysis to examine the influence of the Open Unemployment Rate (TPT) and the Labor Force Participation Rate (TPAK) on the Poverty Rate. Classical assumption tests including normality, multicollinearity, and heteroscedasticity were performed to validate the regression model. The statistical software used in this analysis ensures the accuracy of the data processing, and the significance of the regression coefficient is tested through the t-test and F-test in evaluating the partial and simultaneous influence of independent variables.

RESULTS AND DISCUSSION

Result

1 Normality

The normality test is carried out to ensure that the residual data in the regression model is distributed normally, which is one of the important requirements in classical linear regression.

Table 2
Normality

| One-Sample Kolmogorov-Smirnov Test | | |
|------------------------------------|----------------|-------------------------|
| N | | Unstandardized Residual |
| | | 14 |
| Normal Parameters, b | Mean | .0000000 |
| | Std. Deviation | 130.74072288 |
| Most Extreme Differences | Absolute | .125 |
| | Positive | .125 |
| | Negative | -.079 |
| Test Statistic | | .125 |
| Asymp. Sig. (2-tailed) | | .200c,d |

a. Test distribution is Normal.

b. Calculated from data.

c. Lilliefors Significance Correction.

d. This is a lower bound of the true significance.

Based on data management, the Kolmogorov-Smirnov test on non-standardized residual was produced, and a significance value of 0.200 was obtained. This value is greater than the critical limit of 0.05, so it can be concluded that the residual data is normally distributed. The normality of these data strengthens the validity of the regression model because the assumption of the normal distribution is met, so that subsequent analyses, such as t-tests and F-tests, can be performed accurately. Thus, there is no indication of violation of the assumption of normality in this study, and the results of the model estimation can be considered valid to be interpreted statistically.

2 Heterokedasticity

The heteroscedasticity test was used to identify whether there was a non-constant variance of the residual in the regression model. In this study, the test was carried out by looking at the significance of the regression between the residual absolute value (ABS_RES) and the independent variable.

Table 3
Heteroscedasticity test

| Coefficient | | | | | |
|--------------------------------|---------|------------|---------------------------|-------|------|
| Unstandardized Coefficients | | | Standardized Coefficients | | |
| Type | B | Std. Error | Beta | t | Sig. |
| 1 (Constant) | 147.629 | 250.685 | | .589 | .568 |
| Open Unemployment Rate | -.628 | .672 | -.284 | -.934 | .370 |
| Labor Force Participation Rate | .003 | .025 | .034 | .112 | .913 |

a. Dependent Variable: ABS_RES

The test results showed that the significance value for the Open Unemployment Rate (TPT) variable was 0.370 and for the Labor Force Participation Rate (TPAK) was 0.913. Both significance values are well above the 0.05 limit, so it can be concluded that there are no symptoms of heteroscedasticity in the model. This means that the residuals in the model have a constant variance, which means that one of the main conditions in

multiple linear regression models has been met. Thus, the regression estimation results do not experience bias caused by the presence of certain patterns in residual variance, so the model is considered reliable.

3 Multicollinearity

The multicollinearity test is performed with the aim of ensuring that there is no high correlation between independent variables, which can lead to instability in the estimation of regression coefficients.

Tabel 4
Multicollinearity

| | | Coefficient | | | | | Collinearity Statistics | |
|------|--------------------------------|-----------------------------|------------|---------------------------|-------|------|-------------------------|-------|
| Type | | Unstandardized Coefficients | | Standardized Coefficients | | | Tolerance | VIF |
| | | B | Std. Error | Beta | t | Sig. | | |
| 1 | (Constant) | 706.741 | 404.657 | | 1.747 | .109 | | |
| | Open Unemployment Rate | 1.283 | 1.085 | .336 | 1.182 | .262 | .898 | 1.113 |
| | Labor Force Participation Rate | .061 | .041 | .426 | 1.500 | .162 | .898 | 1.113 |

a. Dependent Variable: Poverty Rate

Interpretation :

The results of the analysis in this study show that the Tolerance value for each TPT and TPAK variables is 0.898 and the Variance Inflation Factor (VIF) value is 1.113. Tolerance values greater than 0.10 and VIF less than 10 indicate that there are no multicollinearity problems in this model. Thus, each independent variable can play a role freely in explaining the dependent variable without the strong influence of other independent variables. The absence of multicollinearity ensures the stability and reliability of the regression model, so that the interpretation results of the regression coefficient can be believed to be accurate and not distorted by the internal correlation between the predictor variables.

4 T TEST OUTPUT (Partial)

The partial significance test has the purpose of finding out whether each independent variable individually has a significant influence on the dependent variable.

Tabel 5
Partial

| | | Coefficient | | | | |
|---|--------------------------------|-----------------------------|------------|---------------------------|-------|------|
| | | Unstandardized Coefficients | | Standardized Coefficients | | |
| | Type | B | Std. Error | Beta | t | Sig. |
| 1 | (Constant) | 706.741 | 404.657 | | 1.747 | .109 |
| | Open Unemployment Rate | 1.283 | 1.085 | .336 | 1.182 | .262 |
| | Labor Force Participation Rate | .061 | .041 | .426 | 1.500 | .162 |

a. Dependent Variable: Poverty Rate

The sig value of X1 > 0.05 does not have a significant effect on the Y variable

The sig value of X2 > 0.05 does not have a significant effect on Variable Y

Interpretation :

The results of the t-test showed that the Open Unemployment Rate (TPT) variable had a significance value of 0.262 and the Labor Force Participation Rate (TPAK) of 0.162, both of which were greater than 0.05. This indicates that partially, neither TPT nor TPAK had a significant influence on the poverty rate in Samosir Regency during the 2010–2023 observation period. As such, there is no strong enough statistical evidence to

suggest that changes in open unemployment or individual labor force participation can affect poverty rates in the region. These findings suggest that the relationship between employment variables and poverty may be influenced by other factors that cannot be included in the model, or by Samosir's unique local characteristics.

5 TEST OUTPUT F (Simultaneous)

The F test is carried out with the aim of assessing whether the independent variables together (simultaneously) have an influence on the dependent variables.

Tabel 6
Simultaneous

| NEW ERA | | | | | | |
|---------|------------|----------------|----|-------------|-------|-------|
| Type | | Sum of Squares | Df | Mean Square | F | Sig. |
| 1 | Regression | 56550.653 | 2 | 28275.326 | 1.400 | .287b |
| | Residual | 222210.776 | 11 | 20200.980 | | |
| | Total | 278761.429 | 13 | | | |

a. Dependent Variable: Poverty Rate

b. Predictors: (Constant), Labor Force Participation Rate, Open Unemployment Rate

Interpretation :

The results of the ANOVA test showed that the significance value was 0.287, which is greater than 0.05. This means that simultaneously, the variables of TPT and TPAK do not have a significant effect on the poverty level in Samosir Regency. Thus, the constructed multiple linear regression model cannot effectively explain changes in poverty levels based on the combination of TPT and TPAK variables. These results reinforce the findings of the previous partial test and show that the dynamics of poverty in Samosir are not largely determined by labor market indicators alone. It is likely that there are other variables that are more dominant in influencing poverty rates, such as access to education, social assistance programs, or economic infrastructure.

6 COEFFICIENT DETERMINATION

The determination coefficient is used to see how much variation of the dependent variable (poverty level) can be explained by the independent variables (TPT and TPAK) in the model.

Tabel 6
Determination

| Model Summary | | | | |
|---------------|-------|----------|-------------------|----------------------------|
| Type | R | R Square | Adjusted R Square | Std. Error of the Estimate |
| 1 | .450a | .203 | .058 | 142.13015 |

a. Predictors: (Constant), Labor Force Participation Rate, Open Unemployment Rate

Interpretation :

Based on the results obtained, the Adjusted R Square value is 0.058, which means that only 5.8% variation in the poverty rate in Samosir Regency can be explained by these two independent variables. Meanwhile, the remaining 94.2% is explained by other variables outside the model. This value shows that the regression model used has a very low explainability, so it is less representative in modeling the phenomenon of poverty in the research area. The low contribution of TPT and TPAK variables to poverty variation confirms that it is

necessary to add other variables in subsequent research to capture more relevant factors in explaining poverty as a whole.

7 MULTIPLE REGRESSION EQUATION ANALYSIS

Regression Equations obtained :

$$Y = \beta_0 + \beta_1 X_1 + \beta_2 X_2 + \dots + \beta_n X_n + \varepsilon$$

Discussion

This study found that the Open Unemployment Rate (TPT) and the Labor Force Participation Rate (TPAK) did not have a statistically significant influence on the poverty rate in Samosir Regency from 2010 to 2023. These findings are in contrast to the general economic theory that high unemployment contributes to poverty through declining household income and weakening consumption capacity. An adjusted R^2 value of only 5.8% suggests that other variables outside of employment indicators may play a more dominant role in influencing poverty trends in the region. These findings are inconsistent with research such as Rahayu and Syafruddin (2022), and Simatupang and Hutapea (2023), which found that unemployment has a direct and substantial relationship with poverty, particularly in disadvantaged areas. One possible explanation for the insignificant relationship in Samosir is the low and relatively stable unemployment rate, which does not reach a threshold strong enough to affect macro-level poverty levels. Second, although the rate of TPAK fluctuated, especially a drastic decline during the COVID-19 pandemic in 2020, its correlation with poverty remained statistically insignificant. These findings contradict Ardiansyah and Fitriani (2021) and Rahmah and Susanto (2020), who highlight the role of labor participation in reducing poverty through increasing labor absorption. However, in the case of Samosir, it makes sense that a high TPAK does not reflect productive employment. Most of the labor may be absorbed in seasonal or informal sectors such as agriculture and tourism, which are prevalent in Samosir but offer limited income and job security. This is in line with the opinion of Feriyanto et al. (2020) who explain that poverty in Indonesia is multidimensional and not just a function of job status, especially when jobs are of poor quality.

Furthermore, the lack of significance in the combined (simultaneous) effects of TPT and TPAK on poverty suggests a weak structural relationship between the labour market and income poverty in Samosir. This is different from the conclusions of Nasution and Ramadhani (2021), as well as Muttaqin and Anwar (2023), who emphasized that integrated education policies and job creation are effective tools for poverty alleviation. However, in Samosir, the economy is still highly dependent on sectors with low added value, so the relationship between labor dynamics and poverty is less direct. The continuous decline in poverty rates despite labor market fluctuations indicates the potential influence of other government interventions such as social assistance, infrastructure development, and education programs, as stated by Wahyuni and Prasetyo (2022).

Another reason for the absence of significant impacts may stem from the spatial and sectoral characteristics of poverty in the region. According to Anora et al. (2024), infrastructure inequality is the main determinant of poverty in rural areas. Samosir's limited industrial base and geographical isolation can lead to geographically and sectorally concentrated employment opportunities, so that TPT and TPAK cannot fully capture the complexity of economic vulnerability. In contrast to studies such as Sari and Gunawan (2020) which noted that there is a strong gender and education gap in labor participation that affects poverty, the homogeneous characteristics of the Samosir workforce can dilute these variations, thereby reducing the impact of TPAK that can be observed on poverty.

Finally, macroeconomic resilience and local government strategies can also help explain why fluctuations in TPT and TPAK do not have a significant impact on poverty levels. Mulyani and Harahap (2023) show that regions that adopt regional economic development strategies based on their unique potential, such as tourism in Samosir, can maintain or even reduce poverty despite structural employment problems. This research supports the idea that poverty alleviation in areas such as Samosir requires more than just employment policies; This requires a multisectoral strategy that involves education, health, infrastructure, and inclusive economic development. Future research should consider including variables such as access to health services, education level, social capital, and income inequality to offer a more nuanced and comprehensive understanding of the determinants of poverty.

Conclusion

This study analyzes the impact of the Open Unemployment Rate (TPT) and the Labor Force Participation Rate (TPAK) on the Poverty Rate in Samosir Regency from 2010 to 2023. The results showed that neither TPT nor

TPAK had a statistically significant influence, either partially or simultaneously, on poverty levels during the observation period. The adjusted squared R-value of only 5.8% indicates that poverty variation cannot be adequately explained by these two labor market indicators alone. Despite fluctuations in TPT and TPAK, poverty rates in general show a downward trend, suggesting that other factors, such as education, infrastructure development, and economic diversification, play a more substantial role in poverty alleviation in the region. The results of this study imply that poverty alleviation strategies in Samosir Regency should not only focus on factors related to employment. Instead, a more integrated approach is needed that includes increasing human capital, expanding access to economic resources, and improving regional infrastructure. Future research should consider including additional variables and using more comprehensive models to better capture the complex dynamics that affect poverty. These efforts will support the formulation of more effective and evidence-based policies for sustainable poverty alleviation

References

- Abimanyu, R., et al. (2024). Labor Market Imbalances and Challenges of Job Creation in Indonesia. *Journal of Economics and Regional Development*, 9(1), 12–25.
- Anora, D., et al. (2024). Economic Infrastructure and Poverty: An Empirical Study on Districts in Indonesia. *Journal of Socio-Economic Development*, 8(1), 55–67.
- Ardiansyah, M., & Fitriani, E. (2021). Labor Force Participation Rate and Regional Economic Growth. *Journal of Applied Economics*, 5(2), 134–147.
- Feriyanto, N., et al. (2020). Multidimensional Analysis of Poverty in Indonesia: A Non-Income Approach. *Journal of Indonesian Development Economics*, 8(3), 101–113.
- Mulyani, A., & Harahap, Y. (2023). Local Economic Development Strategy in Reducing the Unemployment Rate. *Journal of Economics and Public Policy*, 11(2), 75–88.
- Muttaqin, A., & Anwar, L. (2023). Labor Inequality and Poverty Stagnation: A Critical Review. *Journal of Social Economics and Humanities*, 7(1), 90–102.
- Nasution, M., & Ramadhani, S. (2021). Integration of Education and Job Training in Poverty Alleviation. *Journal of Sustainable Development*, 6(2), 110–124.
- Rahayu, S., & Syafruddin, T. (2022). Open Unemployment and Poverty Rates: An Analysis of Disadvantaged Regions. *Journal of Economics & Regional Development*, 9(2), 67–79.
- Rahmah, A., & Susanto, D. (2020). Dynamics of TPAK and Job Availability in Rural Areas. *Journal of Economics and Development Studies*, 7(1), 45–58.
- Sari, P. A., & Gunawan, F. (2020). Gender, Education, and Inequality of Labor Participation in Indonesia. *Journal of Gender and Economics*, 4(2), 89–101.
- Simatupang, H., & Hutapea, R. (2023). Labor Concentration and Regional Inequality: The Case of Indonesia. *Journal of Regional Economics*, 5(1), 33–46.
- Wahyuni, T., & Prasetyo, B. (2022). Evaluation of Poverty Alleviation Programs in Indonesia: A Perspective of Dualism Theory. *Journal of Social Policy Analysis*, 10(1), 59–71.
- Simanjuntak, P. (2019). *Introduction to Labor Economics*. Jakarta: UI Press.
- Sukirno, S. (2020). *Development Economics: Processes, Problems and Policy Policies*. Jakarta: Rajawali Press.
- Todaro, M. P., & Smith, S. C. (2021). *Economic Development (12th Edition)*. Jakarta: Erlangga.
- Samosir Regency Central Statistics Agency. (2010–2023). *Social and Employment Publications of Samosir Regency*. Samosir: BPS.