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## **Impact of Inflation on Unemployment and Poverty in Indonesia**

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### **Abstract**

This study investigated how inflation affects unemployment and poverty levels in 34 Indonesian provinces from 2014 to 2022. Using Eviews for direct impact analysis, the researchers employed two models (REM for Model 1, FEM for Model 2) and the Sobel test for indirect effects. Model 1 revealed a notable inverse correlation between inflation and unemployment, which aligns with the Phillips curve principle of a trade-off. Model 2 indicated that inflation directly and significantly reduced poverty, and unemployment also directly and significantly reduced poverty. However, the Sobel test revealed a significant indirect impact: higher inflation, which influenced unemployment and ultimately led to increased poverty.

**Keywords:** inflation, unemployment, poverty, Phillip curve, trade-off

### **1. Introduction**

Within the complex framework of economic analysis, the relationships between various macroeconomic indicators provide insightful narratives on how alterations in one domain can propagate throughout an entire system. Central to both scholarly investigation and policy formulation is the intricate association between inflation, unemployment, and poverty. Although the direct consequences of inflation on poverty are widely acknowledged, a less thoroughly investigated avenue pertains to understanding how inflation influences poverty through the intervening factor of unemployment. This nuanced perspective endeavors to disentangle the multifaceted layers of causation and interaction, thereby elucidating how price fluctuations can initiate a sequence of events that ultimately define the socioeconomic well-being of a society's most vulnerable segments.

For empirical context, Table 1 depicts the dynamics of poverty in Indonesia between 2014 and 2022. A conspicuous increase in the impoverished population was observed in 2015, representing an increment of 312.78 thousand individuals. This surge was directly attributable to widespread redundancies across numerous industries, contributing to elevated unemployment rates and growing income insecurity. Specifically, the manufacturing sector, critically dependent on imported raw materials, experienced a production decline in 2015. This downturn resulted from escalating costs associated with imported raw materials, driven by adverse foreign exchange rate movements, notably the depreciation of the Indonesian Rupiah (IDR) against the

US Dollar (Badan Pusat Statistik, 2015). These workforce reductions impacted diverse industries, with a pronounced effect on labor-intensive sectors such as the garment and textile industry, the metal industry, and the shoe industry. The fundamental cause of these layoffs was a deficit of orders, compelling companies to cease operations (Jefriando, 2015).

Table 1. Number of Poor People in Indonesia 2014-2022 (thousand people)

Year	Number of Poor People	Change
2014	28.280,01	-
2015	28.592,79	312,78
2016	28.005,39	-587,40
2017	27.771,22	-234,17
2018	25.949,80	-1.821,42
2019	25.144,72	-805,08
2020	26.424,02	1.279,30
2021	27.542,77	1.118,75
2022	26.161,16	-1.381,61

Source: Badan Pusat Statistik (2023)

Poverty reduction was observed between 2016 and 2019, attributable to government interventions aimed at assisting low-income individuals. Conversely, the advent of the Covid-19 pandemic in 2020 precipitated an increase in the poverty rate, negating previous gains. This was primarily due to extensive job dismissals, which dramatically elevated unemployment and consequently forced more people into poverty. For 2021, the projection is that the number of impoverished individuals will continue to grow, a consequence not only of existing unemployment but also of a surge in new job seekers who are unable to find work.

Looking forward to 2022, there's a possibility that the number of impoverished individuals will decline as the economy starts to rebound from the lingering effects of the COVID-19 pandemic. Inflation, defined as a continuous increase in the overall price level, can disrupt an economy's equilibrium. When prices escalate, people's purchasing power erodes, potentially causing difficulties for those on fixed incomes or with limited financial resources. The common understanding is that this phenomenon directly contributes to poverty, particularly for marginalized and low-income populations. However, the progression from inflation to poverty is not a simple, linear one. It often navigates the complex terrain of unemployment, where inflation's impact can initiate a chain of labor market changes that profoundly affect the poverty situation.

Unemployment, as a major economic issue, plays a vital role in linking inflation to poverty. When inflation drives prices up rapidly, businesses often struggle with higher operational expenses. As a result, they may either cut jobs or slow down hiring. These shifts in the labor market can lead to increased unemployment as companies adjust to changing economic conditions. The Phillips Curve (Phillips, 1958) is a frequent tool for analyzing the relationship between inflation and unemployment. Although rising inflation might initially lower

unemployment by boosting demand, it can eventually cause job losses as the economy undergoes necessary corrections.

The narrative of poverty is significantly influenced by the intricate relationship between inflation and unemployment. When inflation-induced economic adjustments result in job displacement or reduced employment hours, individuals' incomes decline, rendering them susceptible to impoverishment. Consequently, inflation's contribution to poverty transcends a mere reduction in purchasing power, being intrinsically linked to the dynamics of the labor market.

Wulandari et al. (2019) examined how inflation influences unemployment. Using the VECM method, their findings revealed that unemployment initially rises in response to inflation shocks before declining.

This research delves into the intricate relationship between inflation, unemployment, and poverty, with particular emphasis on the role of unemployment as a mediator. By assessing established theoretical models, analyzing empirical data, and reviewing real-world case studies, this study aims to uncover the complex causal links among these economic factors. Through the application of rigorous analytical techniques, it seeks to deepen the understanding of how labor market dynamics shape the effects of inflation on poverty. Ultimately, the insights gained from this investigation aim to inform policy development and strategic measures focused on reducing poverty and fostering economic resilience.

Anshori & Suparta (2018) conducted research in East Java to examine how economic growth, workforce size, and inflation impact unemployment. Their multiple linear regression analysis found that inflation significantly increases unemployment in the region, aligning with findings from Suparta et al. (2021), who also identified a positive correlation between inflation and unemployment. Furthermore, research from Sabir & Naz (2015), Macharia & Otieno (2015), Thayaparan (2014), Doğan (2012), Kasseh (2018), Buba & Ishak (2014), Abu (2019), and Ozcelebi & Ozkan (2017), likewise suggests that inflation exerts a negative influence on unemployment.

The relationship between inflation and poverty has been a subject of extensive research, yielding diverse findings. Several studies demonstrate a direct link between inflation and increased poverty. For instance, Afandi et al. (2017) utilized an Error Correction Model (ECM) to analyze Indonesian poverty drivers from 1981 to 2013, concluding that inflation significantly exacerbated poverty. Similarly, Susanto (2014) applied dynamic panel data regression with ECM and found a positive correlation between inflation and poverty in Java, even when accounting for factors like economic growth and minimum wages. Yolanda (2017) further supported this, with her regression analysis of Indonesian data (1997–2016) also confirming that inflation had a substantial positive impact on poverty. Conversely, other research suggests a different dynamic. Egbe & Clement (2011), employing a Single Equation Regression Model in SPSS to identify poverty determinants, reported an insignificant negative correlation between inflation and poverty. In a similar vein, Canavire-Bacarreza et al. (2018) conducted an econometric study

across 25 Peruvian states from 1997 to 2010 and indicated that inflation had a negligible effect on poverty reduction.

The relationship between unemployment and poverty has been explored in several studies, revealing a predominant positive correlation. For example, Edeme et al. (2017) used generalized methods with a semi-macro panel dataset to show that unemployment positively and significantly influences poverty in Nigeria. Similarly, Marinda et al. (2017) employed fixed-effect panel data regression to conclude that unemployment has a positive and significant effect on poverty levels in East Java, while Egbe & Clement (2011) and Haria & Anitasari (2023) also found a significant positive link using a Single Equation Regression Model. Conversely, Quy's (2016) regression analysis of Vietnamese provincial data (2012-2015) presented a divergent finding, indicating that unemployment had a negative and significant impact on poverty.

Grounded in the preceding discussion, this research aims to contribute to understanding by analyzing the direct effects of inflation on unemployment and poverty, alongside the direct influence of unemployment on poverty. A further objective is to elucidate the significant indirect impact of inflation on poverty, with the unemployment rate acting as a crucial mediator.

Inflation, as defined by Badan Pusat Statistik (2020), refers to a sustained increase in the general prices of goods and services. According to Welch & Welch (2010), this phenomenon is mainly driven by two key mechanisms: demand-pull and cost-push factors.

Demand-pull inflation happens when strong consumer demand for goods and services outstrips supply, leading to higher prices. Conversely, cost-push inflation results from increased production expenses, prompting businesses to raise their prices. These cost pressures can originate from various factors such as higher wages, more expensive raw materials, increased fuel or machinery costs, elevated borrowing expenses, and even strategies to improve profitability. For instance, rising labor costs directly increase production expenses, contributing to inflation. Furthermore, widespread impacts like surging energy costs for all businesses or mounting healthcare expenses for employers also fuel overall inflationary trends.

Kim & Lim (2018). define unemployment as the difference between the number of people willing to work (from households) and the number of jobs employers (businesses) are offering. The unemployment rate effectively highlights an economy's underutilization of its available workforce. It signals that the economy is failing to create enough jobs for those willing and actively seeking employment. This rate is also a key indicator used to assess progress toward the Sustainable Development Goals (SDGs) (ILO, 2020).

Absolute poverty refers to the condition where individuals are unable to adequately utilize their existing resources to satisfy fundamental necessities. Its determination involves identifying the total population whose real income falls beneath a predetermined minimum threshold, commonly known as the international poverty line. This standard is notable for transcending national borders, being independent of a country's per capita income, and disregarding differences in

price levels. As Todaro & Smith (2015) clarify, it quantifies poverty by assessing whether individuals subsist on less than \$1.25 or \$2 daily, adjusted for purchasing power parity (PPP dollars).

The evaluation of absolute poverty extends beyond mere income assessment to include critical dimensions such as inadequate nutrition, deficient health, inferior clothing, unsatisfactory housing conditions, and constrained educational opportunities. Therefore, Jhingan (2012) posits that absolute poverty serves as a comprehensive indicator of a society's diminished overall quality of life.

**2. Method**

This study utilizes panel data from 34 Indonesian provinces spanning 2014-2022. The dataset includes provincial figures for the inflation rate (calculated from the growth of the implicit index in percent), the open unemployment rate (percent of the labor force), and the poverty rate (percent of the population below the poverty line). Figure 1 visually presents the conceptual framework, which guides the data analysis and exploration of variable relationships.

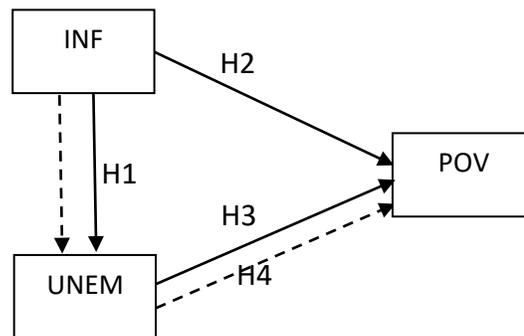


Figure 1. Conceptual Framework

Figure 1 illustrates two regression equations that show a direct relationship: the first indicates that unemployment (UNEM) is influenced by inflation (INF), and the second states that poverty (POV) is a result of both inflation and unemployment. From this analysis, the indirect impact of inflation on poverty is identified, with unemployment serving as a mediating factor.

To assess this conceptual framework, we employed Eviews software. Several model selection tests were carried out, which then guided the development of the following regression equations:

$$UNEM = \beta_0 + \beta_1 INF + E_i \tag{1}$$

$$POV = \beta_0 + \beta_1 INF + \beta_2 UNEM + E_i \tag{2}$$

Where:

INF: Inflation rate

UNEM: Unemployment rate

POV: Poverty rate

$E_i$ : Random Error

This study explores four key hypotheses:

H<sub>1</sub>: There is a direct causal link between the inflation rate and the unemployment rate.

H<sub>2</sub>: The inflation rate directly affects the poverty rate.

H<sub>3</sub>: The unemployment rate directly influences the poverty rate.

H<sub>4</sub>: The inflation rate indirectly affects the poverty rate, operating through the unemployment rate as a mediating variable.

### 3. Results and Discussion

#### 3.1 Selection of Model

##### 3.1.1 UNEM Model

The first model suggests that inflation influences unemployment. This relationship can be represented mathematically as follows:

$$UNEM = \beta_0 + \beta_1 INF + E_i$$

To select the optimal model, the process begins with the Chow test. As detailed in Table 2, this test helps in deciding whether the FEM or the CEM is more suitable.

Table 2. Chow Test for UNEM Model

Effects Test	Statistic	d.f.	Prob.
Cross-section F	33.6796	(33,271)	0.0000
Cross-section Chi-square	498.6206	33	0.0000

A Cross-section Chi-square probability value of 0.0000, displayed in Table 2, led to the rejection of the null hypothesis at the 0.05 significance level, thus indicating the Fixed Effect Model (FEM) as the optimal choice. After this confirmation, the analysis moved to the Hausman test, presented in Table 3, conducted to differentiate between the suitability of the FEM and the REM.

Table 3. Hausman Test for UNEM Model

Test Summary	Chi-Sq. Statistic	Chi-Sq. d.f.	Prob.
Cross-section random	3.1732	1	0.0749

The Hausman test, detailed in Table 3, yielded a random cross-section probability of 0.0749. Because this value is greater than the 0.05 significance level, the null hypothesis is accepted, suggesting the Random Effects Model (REM) as the more suitable choice. Consequently, considering the outcomes of both the Chow and Hausman tests, the REM is selected as the optimal model for UNEM.

3.1.2 POV Model

In the second model, both inflation and unemployment are shown to affect poverty, as demonstrated by the subsequent equation:

$$POV = \beta_0 + \beta_1 INF + \beta_2 UNEM + E_i$$

The selection of the most suitable model follows the same procedure applied in Model 2. It starts with the Chow test, as presented in Table 4, which helps identify whether the FEM or the CEM is the more appropriate choice.

Table 4. Chow Test for POV Model

Effects Test	Statistic	d.f.	Prob.
Cross-section F	386.918	(33,270)	0.0000
Cross-section Chi-square	1186.431	33	0.0000

The Fixed Effect Model (FEM) was determined to be the most appropriate choice, as indicated by a Cross-section Chi-square probability of 0.0000 (Table 4) which is below the 0.05 significance level, leading to the rejection of the null hypothesis. The analysis then proceeded to the Hausman test, as detailed in Table 5.

Table 5. Hausman Test for POV Model

Test Summary	Chi-Sq. Statistic	Chi-Sq. d.f.	Prob.
Cross-section random	7.848953	2	0.0198

The Hausman test results presented in Table 5 show a random cross-section probability of 0.0198, which is below the 0.05 significance level. As a result, the null hypothesis ( $H_0$ ) is rejected, indicating that the Fixed Effect Model (FEM) is the more appropriate option. By integrating the outcomes of both the Chow test and the Hausman test, the Fixed Effect Model (FEM) is confirmed as the optimal model for POV.

3.2 Analysis

3.2.1 UNEM Model

Table 6 presents the estimated regression coefficients for the Random Effect Model (REM), which was determined to be the most appropriate based on the model selection test outcomes.

Table 6. REM for UNEM Model

Variable	Coefficient	Std. Error	t-Statistic	Prob.
C	5.4589	0.2871	18.98862	0.0000
INF	-0.0456	0.0155	-2.936258	0.0036

Table 6 illustrates the UNEM Model's assessment of the direct relationship between inflation and the unemployment rate. The analysis demonstrates that inflation significantly and negatively impacts unemployment, thereby affirming H<sub>1</sub>'s premise that the inflation rate directly affects the unemployment rate. This suggests a classic trade-off, wherein lower inflation typically correlates with elevated unemployment levels, and vice versa. This outcome is consistent with the theoretical framework of the Phillips Curve (Phillips, 1958), which posits that anti-inflationary policies may inadvertently lead to increased unemployment. Furthermore, this conclusion is reinforced by earlier research, including studies by Sabir & Naz (2015), Macharia & Otieno (2015), Thayaparan (2014), Doğan (2012), Kasseh (2018), Buba & Ishak (2014), Abu (2019), and Ozcelebi & Ozkan (2017), all of whom documented a comparable inverse relationship where inflation contributes to a reduction in unemployment. However, these results diverge from the findings of Suparta et al. (2021), who observed inflation tending to worsen unemployment outcomes.

### 3.2.2 POV Model

Table 7 displays the estimated regression coefficients for the Fixed Effect Model (FEM), which was determined to be the most appropriate based on the model selection test results.

Table 7. FEM for POV Model

Variable	Coefficient	Std. Error	t-Stat	Prob
C	14.084	0.0674	208.90	0.000
INF	-0.1021	0.0031	-32.67	0.000
UNEM	-0.5024	0.0120	-41.80	0.000
R-squared			0.991081	
Adjusted R-squared			0.989925	
F-statistic			857.23	
Prob(F-statistic)			0.000	

In POV Model, there are two distinct direct effects: one from inflation on the poverty rate, and another from the unemployment rate on the poverty rate.

#### 3.2.2.1 Direct effect of the inflation on the poverty rate

Table 7 indicates that inflation significantly reduces the poverty rate, evidenced by a regression coefficient of -0.102150. These findings support the acceptance of H<sub>2</sub>, which posits that the inflation rate directly influences the poverty rate. Practically, this suggests that policies to reduce inflation might inadvertently lead to higher poverty rates, while increased inflation could potentially decrease poverty. This directional relationship supports the findings of Egbe & Clement (2011), and Canavire-Bacarreza et al. (2018), who also found that inflation reduces poverty. Conversely, these results contradict the research of Afandi et al. (2017), Susanto (2014), and Yolanda (2017), who concluded that inflation increases poverty rates.

3.2.2.2 Direct effect of the unemployment rate on the poverty rate

As presented in Table 7, the unemployment rate is observed to exert a significant negative impact on the poverty rate, characterized by a regression coefficient of -0.502473. This result provides empirical support for H<sub>3</sub>, which hypothesizes a direct influence of the unemployment rate on the poverty rate. The unexpected implication of this finding is that declines in unemployment could, paradoxically, be associated with an increase in poverty, while an ascent in unemployment might, under specific conditions, lead to its reduction. This pattern of relationship is consistent with the findings of Quy (2016), who similarly identified a significant inverse correlation between unemployment and poverty. Conversely, these findings diverge from the conclusions presented by Edeme et al. (2017), Marinda et al. (2017), Egbe & Clement (2011), and Haria & Anitasari (2023), all of whom posited that unemployment generally contributes to elevated poverty rates.

3.2.3 Indirect effect of inflation on the poverty rate via unemployment

Referring to Figure 1 within the Conceptual Framework, and employing the analytical insights from both UNEM Model and POV Model, an indirect influence of inflation upon the poverty rate becomes apparent. This indirect relationship is contingent upon the role of unemployment as an intervening variable. Therefore, a singular indirect effect is identified, specifically the mediation of inflation's impact on poverty through the unemployment rate. To quantitatively evaluate this indirect impact, the t-value may be computed utilizing the subsequent formula (Preacher & Leonardelli, 2023).

Table 8. Sobel-Test

Input:		Test statistic:	Std. Error:	p-value:
a	-0.045673	Sobel test: 2.92901112	0.00783522	0.00340042
b	-0.502473	Aroian test: 2.92817767	0.00783745	0.00340955
s <sub>a</sub>	0.015555	Goodman test: 2.92984528	0.00783299	0.00339131
s <sub>b</sub>	0.012019	Reset all	Calculate	

As presented in Table 8, a t-value of 2.929 and a p-value of 0.0034 substantiate that inflation exerts a significant indirect influence on the poverty rate, operating via the unemployment rate. These results confirm the acceptance of H<sub>4</sub>, which posits that inflation influences the poverty rate indirectly by affecting unemployment. This suggests that higher inflation can lead to a substantial increase in poverty. To counter this, policies aimed at reducing inflation are crucial for lowering the poverty rate. Therefore, the government's current focus on curbing inflation is an appropriate strategy for poverty reduction in Indonesia.

4. Conclusion

The inflationary process diminishes people's purchasing power, disproportionately affecting those with middle to lower incomes and consequently driving them into deeper poverty. This phenomenon often stems from rising production costs, which in turn curtail public demand and

national output. Such a reduction in production then precipitates job losses or a rise in unemployment, ultimately contributing to an increase in the nation's impoverished population. The results of this study paint a nuanced picture of the connections between key economic indicators. Consistent with the Phillips curve theory, our findings suggest a direct, negative, and significant trade-off between inflation and unemployment: higher inflation appears to correlate with lower unemployment. Furthermore, our analysis indicates that inflation has a direct, negative, and statistically significant effect on the poverty rate, pointing to a counterintuitive possibility where increasing inflation might help to reduce poverty. Similarly, we observed a direct, negative, and considerable impact of the unemployment rate on poverty, implying that a rise in unemployment could paradoxically lead to a decrease in poverty levels. Importantly, the study also highlights an indirect, positive, and statistically significant pathway from inflation to poverty, mediated by the unemployment rate. This suggests that even if inflation directly reduces poverty, its influence on unemployment can, in turn, indirectly push poverty rates higher.

Addressing the complex relationship between inflation, unemployment, and poverty requires a dual strategy: short-term aid coupled with lasting structural shifts. To mitigate the immediate effects of inflation on vulnerable populations, targeted social safety nets are crucial. Simultaneously, fostering job creation and economic growth is essential. Long-term solutions also include strategic investments in education, skills training, and labor market reforms to reduce unemployment and empower individuals to overcome poverty.

## References

- Abu, N. (2019). Inflation and Unemployment Trade-off: A Re-examination of the Phillips Curve and its Stability in Nigeria. *Contemporary Economics*, 13(1), 21–34. <https://doi.org/10.5709/ce.1897-9254.296>
- Afandi, A., Wahyuni, D., & Sriyana, J. (2017). Policies to Eliminate Poverty Rate in Indonesia. *International Journal of Economics and Financial Issues*, 7(1), 435–441.
- Anshori, Z., & Suparta, I. M. (2018). Pengaruh Pertumbuhan Ekonomi, Jumlah Angkatan Kerja, dan Inflasi Terhadap Tingkat Pengangguran di Provinsi Jawa Timur (2007-2016). *Jurnal Ekonomi & Bisnis*, 3(2), 677–686.
- Badan Pusat Statistik. (2015). *BPS: Tingkat Pengangguran Terbuka Meningkat dari Tahun Sebelumnya*. Kompas.Com. <https://money.kompas.com/read/2015/11/05/171744726/BPS.Tingkat.Pengangguran.Terbuka.Meningkat.dari.Tahun.Sebelumnya>
- Badan Pusat Statistik. (2020). *Inflasi*. Badan Pusat Statistik. <https://www.bps.go.id/subject/3/inflasi.html>
- Badan Pusat Statistik. (2023). *Tabel Dinamis*. Bps.Go.Id. <https://www.bps.go.id/site/resultTab>
- Buba, S., & Ishak, S. (2014). An Analysis of the Effect of Real Gross Domestic Product on Unemployment in Nigeria: ( An ARDL- Approach ). *Journal of Economics and Sustainable Development*, 5(14), 7–14.
- Canavire-Bacarreza, G., Jetter, M., & Robles, M. (2018). When Does Economic Growth Reduce Poverty and Strengthen the Middle Class? A State-Level, Sector-Specific Analysis of Peru. *Southern Economic Journal*, 84(4), 1067–1087. <https://doi.org/doi:10.1002/soej.12268>

- Doğan, T. T. (2012). Macroeconomic variables and unemployment: The case of Turkey. *International Journal of Economics and Financial Issues*, 2(1), 71–78.
- Edeme, R. K., Ogbeide, E. O., Innocent, A. I., & Ugwu, S. (2017). Examination of the Dynamic Relationship Between Poverty and Inequality: Evidence from Nigeria Micro Data. In *International Journal of Economics and Financial Issues* (Vol. 7, Issue 2, pp. 518–523).
- Egbe, G., & Clement, A. (2011). The Impact of Macroeconomic Policies and Programs on Poverty Problems. *Journal of Economics and Sustainable Development*, 2(9), 1–12. <https://doi.org/10.1596/978-0-8213-5778-1>
- Haria, T. F. N., & Anitasari, M. (2023). The Influence of Economic Growth, Human Development Index, and Open Unemployment Rates on Poverty in Sumatra. *BICEMBA: 1st Bengkulu International Conference on Economics, Management, Business and Accounting*, 1(1), 182–187.
- Hasan, N., & Sun'an, M. (2019). The Effect of Inflation and Private Investment on Open Unemployment in North Maluku (Partial Adjudication Model (PAM) Approach). *Journal of Economics and Sustainable Development*, 10(12), 67–76. <https://doi.org/10.7176/JESD>
- ILO. (2020). *Indicator description: Unemployment rate*. ILOSTAT. <https://ilostat.ilo.org/resources/methods/description-unemployment-rate/>
- Jefriando, M. (2015). *Ada 26.000 Karyawan Kena PHK per Agustus 2015*. DetikFinance. <https://finance.detik.com/berita-ekonomi-bisnis/d-3008350/ada-26-000-karyawan-kena-phk-per-agustus-2015>
- Jhingan, M. L. (2012). *The Economics of Development and Planning* (40th Editi). Vrinda Publications (P) Ltd. - Delhi. <https://www.pdfdrive.com/the-economics-of-development-and-planning-40th-ed-e158057131.html>
- Kasseh, P. A. (2018). The Relation between Inflation and Unemployment in the Gambia: Analysis of the Philips Curve. *Journal of Global Economics*, 06(02), 6–12. <https://doi.org/10.4172/2375-4389.1000294>
- Kim, C. U., & Lim, G. (2018). Minimum wage and unemployment: An empirical study on OECD countries. *Journal of Reviews on Global Economics*, 7, 1–9. <https://doi.org/10.6000/1929-7092.2018.07.01>
- Macharia, M. K., & Otieno, A. (2015). Effect of Inflation on Unemployment In Kenya. *International Journal of Science and Research (IJSR)*, 6(6), 1980–1984. <https://doi.org/10.21275/ART20174660>
- Marinda, A., Nasikh, Mukhlis, I., Witjaksono, M., Utomo, S. H., Handoko, Wahyono, H., Soesilo, Y. H., Moehariono, & Santoso, S. (2017). The Analysis of The Economic Growth, Minimum Wage, and Unemployment Rate to The Poverty Level in East Java. *International Journal of Economic Research*, 14(13), 127–138.
- Ozcelebi, O., & Ozkan, S. (2017). Economic Factors Influencing the Dynamics of Unemployment in the G10 Countries: Empirical Evidence from Panel Data Modeling. *Journal of Business, Economics and Finance (JBEF)*, 6(1), 17–30. <https://doi.org/10.17261/pressacademia.2017.382>
- Phillips, A. W. (1958). The Relation Between Unemployment and the Rate of Change of Money Wage Rates in the United Kingdom, 1861–1957. *Economica*, 25(100), 283–299. <https://doi.org/10.1111/j.1468-0335.1958.tb00003.x>

- Preacher, K. J., & Leonardelli, G. J. (2023). *Calculation for The Sobel Test: An Interactive Calculation Tool for Mediation Tests*. <http://www.quantpsy.org/sobel/sobel.htm>
- Quy, N. H. (2016). Relationship between Economic Growth, Unemployment and Poverty: Analysis at Provincial Level in Vietnam. *International Journal of Economics and Finance*, 8(12), 113–119. <https://doi.org/10.5539/ijef.v8n12p113>
- Sabir, G. M., & Naz, S. (2015). Economic Determinants of Unemployment: Empirical Result from Pakistan. *Journal of Economics and Sustainable Development*, 6(9), 150–154.
- Suparta, I. M., Ujianto, & Murgianto. (2021). Effect of Minimum Wages on Inflation and Unemployment in East Java - Indonesia. *Journal of Economics and Sustainable Development*, 12(8), 18–23. <https://doi.org/10.7176/JESD/12-8-04>
- Susanto, J. (2014). Impact of economic growth, inflation and minimum wage on poverty in Java. *Media Ekonomi & Teknologi Informasi*, 22(1), 32–41.
- Thayaparan, A. (2014). Impact of Inflation and Economic Growth on Unemployment in Sri Lanka: A Study of Time Series Analysis. *Global Journal of Management and Business Research: B Economics and Commerce Volume*, 13(5), 44–54.
- Todaro, M. P., & Smith, S. C. (2015). *Economic Development* (Twelfth Ed). United Kingdom: Pearson Education Limited. <https://www.pdfdrive.com/economic-development-d187050872.html>
- Welch, P. J., & Welch, G. F. (2010). *Economics: Theory & Practice* (9th Editio). John Wiley & Sons. <https://books.google.co.id/books?id=O5i-d3thv-4C&pg=PA146&lpg=PA146&dq=four+macroeconomic+sectors+%22households%22+%22businesses%22+%22government%22+%22foreign%22&source=bl&ots=DYalEGh7AJ&sig=ACfU3U3U4Z3Gya5HBb9i3TLz1EohyVXDYA&hl=en&sa=>
- Wulandari, D., Utomo, S. H., Narmaditya, B. S., & Kamaludin, M. (2019). Nexus between inflation and unemployment: Evidence from Indonesia. *Journal of Asian Finance, Economics and Business*, 6(2), 269–275. <https://doi.org/10.13106/jafeb.2019.vol6.no2.269>
- Yolanda, Y. (2017). Analysis of factors affecting inflation and its impact on human development index and poverty in Indonesia. *European Research Studies Journal*, 20(4), 38–56. <https://doi.org/10.35808/ersj/873>