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Inflation and Unemployment Trade-off in the Global Economy in Indonesia Post COVID-19: Revisiting the Phillips Curve Concept

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Abstract

The purpose of this study is to re-evaluate the relevance of the Philipps curve in Indonesian economy post COVID-19 pandemic. According to the Phillips Curve theory, there is a negative correlation between unemployment and inflation, but the post-pandemic economic landscape presents complications. Using a descriptive perspective, and linear regression on the 2019 − 2024 inflation and unemployment data, research suggests that they are inversely associated with each other, yet, insiginificant from the statistical point of view. So this says that: whatever the causes of inflation, they are mostly from other variables such as changes in global supply chains and international policy decisions (global in addition to domestic policy) rather than unemployment. The traditional view of the Phillips Curve model thus is considered not suitable in modeling Indonesia macroeconomic nowadays. These findings underscore the need for a more flexible, locally-sensitive and data-informed approach to policy-making with respect to the economy.

Introduction

The COVID-19 pandemic has heralded a macroeconomic discontinuity of historic magnitude, as it has dented both supply as well as demand chains combined and unlike the typical recessions, which can be effectively identified with an outcome of a reduction in demand. International Monetary Fund (IMF) was also quick in providing advice and financial aid in stabilizing weak economies. However these global efforts, national economies like that of Indonesia were seen to collapse drastically indicating weaknesses within institutional frameworks as well as theoretical models employed to describe macroeconomic movements. In the same year 2020 alone, the GDP of Indonesia shrank by an estimated 2.07 percent to 3.49 percent (BPS, 2021), which was triggered by decreased investment levels, numerous retrenchments, and declining household spending.

It is with this unsteady background that the traditional Phillips Curve, with its prediction of a negative correlation between inflation and unemployment, has been increasingly questioned empirically and theoretically. This model once informed the monetary policy in the sense that the policymakers knew how to make the significant balance between price stability and employment. Nevertheless, its relevance had already started to fade even before the pandemic. Many advanced economies show that the curve has increasingly become flatter (Jenson, 2020; Allen et al., 2020; Gudmundsson et al., 2024), which implies that inflation does not react as expected to unemployment fluctuations. This effect has been observed in Japan, the Eurozone, and the United States, where stocks of unemployed people continued to be low, as inflation proved to be muted throughout most of the 2010s (Ball et al., 2022; Ślasko & Stawska, 2023; Fukunaga et al., 2024). These developments further put the universality of the Phillips Curve

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framework to doubt especially in the emerging markets that are experiencing structural changes.

The lack of consistency in the relationship between inflation and unemployment is observed in the literature of the Indonesian context where the situation is becoming conspicuous. Baqaee & Farhi (2022) went further to determine how the two shocks of pull, i.e., demand contraction and supply disruption in the COVID-19 era distorted forms as well as price and wage administration, making the curve even harder to validate. In the same vein, Fauzi & Wulandari (2022) revealed that, during 2020-2022, the increase in unemployment was not associated with inflationary pressures but, instead, was parallel to poor household purchasing power and low aggregate demand, which is more representative of demand-deficient stagnation than those stated in classical trade-offs between inflation and the unemployment rate. This trend reflects what occurs in other developing countries like Brazil and India where informality created structures, administrative price control, and susceptibility to the exterior disrupt the assumed association between marketplace tightness and inflation pressure.

Global, Blanchard (2021) has recognized that the Phillips Curve lost all its empirical relevance in advanced economies and stated that inflation has stopped reacting as much as it used to to changes in unemployment because of adjustments in wage-setting behavior, anchoring in expectations and the effects of international supply chains. Seen in the Indonesian case as demonstrated by Petrakis et al. (2020), this critique has been further expanded to include the wider welfare dynamics into the picture inasmuch as the drivers of inflation are becoming more and more mediated by macro factors (i.e., economic growth and demographics). Kahn (2012) also claimed that more direct methods (subsidies, price controls, income transfers) of government intervention had greater impacts on the inflation than the flexibility of labor market. Such observations are in line with the findings of Bernanke & Blanchard (2023) as they do not ascertain the steep inflation rates in developed economies after the pandemic caused by tight labor markets but rather global logistical constraints, fiscal stimulus, and supply bottlenecks.

Researchers suggest that the structural peculiarities can make the use of the Phillips Curve impossible in some conditions, such as the domination of the informal sector, low rates of unionization, and weak monetary policy transmission, as it is the case in the Indonesian economy (ILO, 2023; Wahyuni, 2022). Such characteristics render price determination to be independent of labour market forces, which makes it tricky to achieve the expectations-augmented models of the Phillips Curve as postulated by Friedman (1968) and formed by Gordon (2018). Arifin (2022) emphasized that in regional Indonesian economies, inflation often correlates more strongly with currency depreciation and food price volatility than with employment data—further illustrating the inadequacy of demand-driven models in explaining inflation dynamics.

Moreover, the pandemic has amplified structural changes already underway in the global economy, including increased automation, digitization, and informalization of labor (Ganichev & Koshovets, 2021; Kesar et al., 2022; Tandon et al., 2022; Dordoni & Carreri, 2022). These transformations reduce the responsiveness of wages to labor market conditions, weakening the classical wage-price transmission mechanism (Weller, 2022; Ravallion, 2020). Indonesia has witnessed similar trends, where the rise of gig work and remote employment during the pandemic blurred the lines between employment status and income stability, making it difficult to interpret unemployment statistics in their conventional sense (Sofira, 2023; Ng et al., 2021; Lu et al., 2022; Auguste et al., 2024). These developments suggest that the Phillips Curve—at least in its traditional linear form—may no longer serve as an adequate model for guiding

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economic policy, especially in middle-income economies with structural vulnerabilities and state-mediated pricing regimes.

Taken together, these theoretical and empirical shifts demand a critical re-evaluation of the Phillips Curve's applicability in Indonesia's post-pandemic economic landscape (Syafitri et al., 2023; Putro, 2024; Hidayahtulloh et al., 2022). This study therefore seeks to re-test the relevance of the Phillips Curve using descriptive analysis and linear regression, based on official data from Indonesia's Central Statistics Agency (BPS) covering the years 2019 to 2024. By exploring both statistical trends and structural implications, this research aims not only to confirm or refute the curve's empirical validity, but also to offer insights into the deeper macroeconomic forces shaping inflation and employment in a post-crisis era. The findings are intended to support a more nuanced, flexible, and data-informed policy framework—one capable of accounting for the unique institutional and structural conditions of the Indonesian economy.

Methods

This study uses descriptive quantitative methods and econometric analysis as the main techniques in data collection and processing. Descriptive quantitative methods are applied to provide a comprehensive view of changes in inflation and unemployment rates in Indonesia over a five-year period, from 2019 to 2024. With this approach, researchers want to map patterns, trends, and variations in both variables through appropriate statistical data and graphs. The purpose of this approach is to understand the macroeconomic dynamics that occur, especially in the context of socio-economic conditions affected by the COVID-19 pandemic.

On the other hand, econometric analysis is used to empirically test the causal relationship between inflation and unemployment and assess the consistency of the relationship over time. This analysis is carried out in the theoretical perspective of the Phillips Curve which shows an inverse relationship between the inflation rate and the unemployment rate. By using econometric models such as regression, this study aims to assess whether the Phillips Curve theory remains relevant and can be applied in the context of the Indonesian economy after the global health crisis.

Tthis combination of approaches allows researchers to not only describe the state of the economy quantitatively but also examine the validity of existing economic theories. This study is also directed to investigate the possibility of structural changes in the relationship between inflation and unemployment that may arise due to economic disruption due to the pandemic. The data used in this study are secondary, obtained from the Central Statistics Agency (BPS) of Indonesia. The data includes:

Table 1. Annual inflation rate (%) from 2019 to 2024.

Years	2019	2020	2021	2022	2023	2024
Inflation (%)	2.72	1.68	1.87	5.51	2.61	1.57

Table 2. Open Unemployment Rate (TPT) (%) as of August from 2019 to 2024.

Years	Ags 2019	Ags 2020	Ags 2021	Ags 2022	Ags 2023	Ags 2024
Unemployment (%)	5.23	7.07	6.49	5.86	5.32	4.91

All data are quoted from official BPS publications and have been summarized in tabular form as a basis for quantitative analysis. This data was chosen because it reflects Indonesia's macroeconomic conditions relevantly before and after the COVID-19 pandemic.

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Analysis Techniques

Linear Regression

Simple Linear Regression is a statistical method for analyzing the effect of one independent variable on one dependent variable. The independent variable (X) acts as an influencing factor, while the dependent variable (Y) is the outcome that is influenced. The main goal is to measure how much influence the independent variable has on the dependent variable and predict the value of Y based on X. In addition, this regression also shows the direction of the relationship, whether positive or negative. The steps to work on Simple Linear Regression are to use the formula: Y = a + bX

With:

- $b = \frac{n\sum XY - \sum X \sum Y}{n\sum X^2 - (\sum X)^2}$
- $a = \frac{\sum Y - b\sum X}{n}$

Phillips Curve Stability Test

A set of popular assumption tests were done to guarantee the strength of the regression model adopted in the current research. The tests played a crucial role in establishing whether the model met the BLUE (Best Linear Unbiased Estimator) requirements which are the pillars of the linear regression modeling. It is particularly important not to have bias and inefficiencies when making policy conclusions of an economic relationship.

First, Jarque-Bera test was used to define residual normality. The test was used to check whether the distribution of residuals was substantially different than the normal distribution, which is essential on the correctness of the hypothesis testing in regression. The findings gave a p-value that was bigger than 0.05 therefore, it was concluded that the residuals were normally distributed, and the normality assumption was satisfied.

Second, the following test with the BreuschGodfrey Serial Correlation LM Test was conducted. Serial correlation in the residuals is a typical problem of time-series data that can bias standard error values and cause misleading inference; this test was employed to identify serial correlation. The p-values obtained were above the 0.05 level, and thus there was no significant autocorrelation, and independent distribution of errors could be assumed.

Glejser test was used to test the existence of heteroscedasticity. In this test, the appropriateness of the assumption of constant variance of residuals across the levels of the independent variable was tested. Results of the tests had no serious signs of heteroscedasticity being present, and thus the specifications of the homoscedasticity assumption could not be rejected, and the estimations of the model were efficient. Finally, Variance Inflation Factor (VIF) was employed to test the multicollinearity. Even in such a situation where the model had just one predictor variable (unemployment), the VIF was calculated which made multicollinearity not a problem. The value of VIF was way below the cut-off mark of 10 and this showed that multicollinearity did not threaten the stability of the model.

Comparative Analysis

A comparative analysis was made in order to evaluate possible structural alteration in the relationship amid inflation and unemployment in distinction macroeconomic phases. This was done to differentiate between the behavior patterns of these two variables before, during and after COVID-19 pandemic in Indonesia. In particular, the survey divided the data into three

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main time frames, namely the previous (2019), the pandemic (202021), and after the pandemic (202224).

In the course of the analysis, the data of inflation and unemployment were considered in isolation and then were compared to each other within every prescribed period of time. The plan was to find out whether there were any visible differences in the inflation-unemployment dynamics caused by macroeconomic imbalances brought by the pandemic. This methodology allowed the researchers to identify temporal misalignment, or structural shifts which could remain sustainable and may complicate the historic interpretation on the Phillips Curve

Result and Discussion

The overall goal of such analysis was to assess the applicability of the Phillips Curve to the post pandemic economic environment, testing the statistical dependence of these two, if any, key macroeconomic indicators. The descriptive and econometric methods of research (time-series comparison, simple linear regressions) were used in the study to identify the patterns and correlations over time in three different epochs pre-pandemic, pandemic, and post-pandemic. Moreover, a set of classical assumption tests was employed to verify stability and reliability of the adopted model. These findings are shown in an ordered sequence that is successive, i.e., starting with descriptive trend in inflation and unemployment results, proceeding with regression results, and finally concluding with interpretations of the diagnostic tests. The above findings are subsequently used to interpret data via the theoretical forecasts of the Phillips Curve as well as the changing economic situation of Indonesia at the time of the COVID-19 cycle.

Inflation Development in Indonesia before, during, and after COVID-19

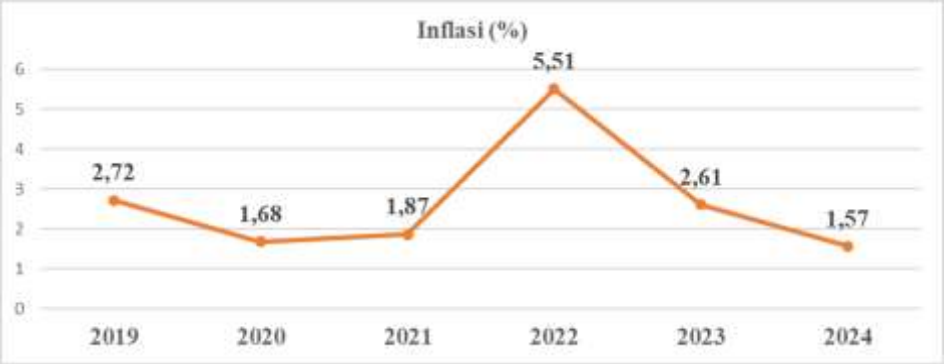

Figure 1. Inflation Rate in Indonesia 2019–2024

The development of inflation in Indonesia from 2019 to 2024 shows a close interaction with the COVID-19 pandemic and the economic recovery process afterward. Annual inflation is used to show the overall price fluctuations of goods and services from year to year, which is also an important picture of the state of the country's economy.

In 2019, before the pandemic, inflation was recorded at 2.72%. This figure reflects relatively good economic stability, with inflation within Bank Indonesia's target range (2%–4%). The balance between demand and supply is running quite smoothly, without any significant pressure on the prices of major goods. This year is considered the last time in normal economic conditions before major disruptions due to the pandemic.

Entering 2020, when the COVID-19 pandemic began to spread, inflation fell drastically to 1.68%. This decline was caused by a number of factors, such as the implementation of large-scale social restrictions, declining purchasing power, weak household consumption, and

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increasing uncertainty at the global level. Business activity also slowed down significantly, resulting in a decline in aggregate demand. In 2021, inflation rose slightly to 1.87%, indicating the beginning of an economic recovery, although there are still weak pressures. Low inflation for two years indicates that inflationary pressures from the demand side are very minimal.

2022 was a turning point when the economy began to recover more significantly, in line with the vaccination program and easing of restrictions. However, inflation actually skyrocketed to 5.51%, the highest figure in the period. This increase was triggered by a mix of domestic and international factors, including increasing global demand after the pandemic, soaring energy and food prices, and adjustments to domestic fuel prices. In addition, supply chain disruptions due to the Russia-Ukraine conflict also exacerbated price pressures, especially in the energy and food sectors.

In 2023, inflationary pressures began to decline with inflation recorded at 2.61%. This decline reflects improvements in the distribution of goods, the stability of commodity prices, and the impact of Bank Indonesia's monetary policy of increasing interest rates to contain inflationary pressures. This trend continued in 2024, when inflation fell further to 1.57%. These results indicate that the Indonesian economy is starting to enter a stabilization phase, with controlled inflation expectations and more effective coordination between monetary and fiscal policies in ensuring price stability. Overall, the inflation pattern in Indonesia during this period shows a clear path: stable before the pandemic, declining during the pandemic due to weak demand, surging after the pandemic due to uneven recovery and external pressures, then declining again in line with economic stabilization. This pattern confirms that inflation is highly influenced by global factors, government policies, and the response of the public and business actors to changes in overall economic conditions.

Unemployment Rate in Indonesia before, during, and after COVID-19

The development of the open unemployment rate (TPT) in Indonesia from 2019 to 2024 reflects dynamic changes in the labor market that are greatly influenced by the impact of the COVID-19 pandemic. TPT serves as an indicator of the proportion of the workforce that has not found work but is still actively looking for it. The data source for this comes from the National Labor Force Survey (Sakernas) which is routinely held by the Central Statistics Agency (BPS) every August.

Figure 2. Unemployment Rate in Indonesia August 2019–August 2024

In 2019, before the pandemic, the TPT was at 5.23%. This figure indicates a fairly stable labor market condition, where most of the workforce has successfully integrated into various jobs,

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both in the formal and informal sectors. Economic growth at that time was good enough to provide the jobs needed to absorb new job seekers.

However, everything changed drastically in 2020 when the pandemic began to spread widely and various social restrictions were implemented. The TPT jumped significantly to 7.07%, which was the highest figure in the last six years. The increase reflects the great pressure on the labor market, where many companies were forced to reduce their activities, hire employees, and even lay off workers. Sectors such as tourism, transportation, trade, and the manufacturing industry were the most affected.

In 2021, although the pandemic was still ongoing, the situation began to show improvement. The TPT fell to 6.49% thanks to the adaptation of society and businesses to the new normal conditions. Several sectors began to recover, and the government implemented economic recovery programs, including support for MSMEs and labor-intensive programs, with the aim of reducing unemployment.

The recovery continued in 2022, as COVID-19 cases declined and activities were relaxed. The TPT fell to 5.86%, supported by increased community mobility and the revival of various business sectors. This positive trend persisted in 2023, where the TPT fell again to 5.32%, in line with the growth of the industrial, construction, and service sectors that were able to absorb a large number of workers.

Entering 2024, the TPT was recorded at 4.91%, the lowest figure in the last six years. This achievement reflects the success of the post-pandemic economic recovery which has had a direct impact on improving labor conditions at the national level. Various government programs, such as increasing access to education, vocational training, and developing labor-intensive programs, have helped strengthen the structure of the labor market.

Overall, these data show that although the health of the labor sector was disrupted by the COVID-19 pandemic, the recovery measures implemented by the government and community adaptation have been able to gradually reduce the unemployment rate. The journey from a high in 2020 to a low in 2024 reflects the resilience and resilience of Indonesia's labor market in weathering the crisis and driving economic recovery.

Simple Linear Regression Results

Dependent Variable: *Inflation*

Method: Least Squares

Date: 06/07/25 Time: 16:35

Sample: 2019-2024

Include observations: 6

Table 3. Regression Estimation Results of the Effect of Inflation and Unemployment on the Dependent Variable

Variable	Coefficient	Std. Error	t-Statistic	Prob.
Inflation	3,773666	5,188523	0,727310	0,5073
Unemployment	-0,191571	0,885048	-0,216453	0,8392
R-squared	0,011577	Mean dependent var		2,660000
Adjusted R-squared	-0,235528	S.D. dependent var		1,476564
S.E. of regression	1,641264	Akaike info criterion		4,090012
Sum squared resid	10,77499	Schwarz criterion		4,020599

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Log likelihood	-10,27004	Hannan-Quinn criter.		3,812144
F-statistic	0,046852	Durbin-Watson stat		2,147220
Prob (F-statistic)	0,839226			

Through a simple linear regression analysis conducted on the relationship between unemployment rate and inflation from 2019 to 2024, the following equation is produced:

INFLATION = 3.773666 − 0.191571 × UNEMPLOYMENT

Thus, the Equation shows that there is an inverse relationship between unemployment and inflation. This inverse means that a 1% increase in the unemployment rate can be expected to increase or decrease inflation by 0.191571%. However, the p-value of 0.8392 indicates that this relationship is not statistically significant at the 5% confidence level. This is also the reason why the R-squared is only 0.011577, which means that only about 1.16% of the variation in inflation can be explained by unemployment while other factors affect the rest. The F-statistics value listed is 0.046852 and the probability value is, which means that the overall model is also not significant.

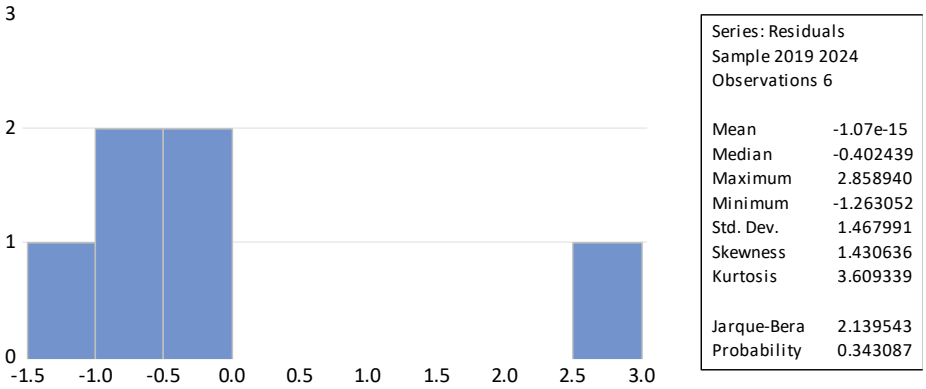

Figure 3. Normality Test (Jarque-Bera Test)

To evaluate the fulfillment of the residual normality assumption, the Jarque-Bera test is used. The results of this test provide a probability value of 0.343087. Because this number is higher than 0.05, it can be concluded that the residuals in this model follow a normal distribution. This is also supported by the shape of the residual histogram which resembles a normal distribution.

Table 4. Autocorrelation Test (Breusch-Godfrey Serial Correlation LM Test)

Breusch-Godfrey Serial Correlation LM Test:					
Null hypothesis: No serial correlation at up to 2 lags					
F-statistic		1,891895	Prob. F(2,2)		0,3458
Obs*R-squared		3,925236			0,1405
Test Equation:					
Dependent Variable: RESID					
Method: Least Squares					
Date: 06/07/25 Time: 17:05					
Sample: 2019-2024					
Include observations: 6					
Presample missing value lagged residuals set to zero.					
Variable	Coefficient	Std. Error	t-Statistic	Prob.	
INFLASI	6,690809	5,595966	1,195649	0,3544	

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PENGANGGURAN	-1,083876	0,935186	-1,158995	0,3661	
RESID(-1)	-0,656064	0,541525	-1,211512	0,3494	
RESID(-2)	-1,073216	0,564746	-1,900353	0,1978	
R-squared	0,654206	Mean dependent var		-1,07E-15	
Adjusted R-squared	0,135515	S.D. dependent var		1,467991	
S.E. of regression	1,364905	Akaike info criterion		3,694767	
Sum squared resid	3,725929	Schwarz criterion		3,55594	
Log likelihood	-7,084301	Hannan-Quinn criter.		3,139031	
F-statistic	1,261263	Durbin-Watson stat		2,374711	
Prob(F-statistic)	0,470859				

Autocorrelation testing using the Breusch-Godfrey method produces a Chi-Square(2) probability value of 0.1405 and an F(2,2) probability of 0.3458. Both values are greater than 0.05, indicating that this model does not experience autocorrelation. In other words, the classical assumption stating that there is no serial correlation has been met.

Table 5. Heteroscedasticity Test (Glejser Test)

Heteroskedasticity Test: Glejser				
Null hypothesis: Homoskedasticity				
F-statistic	0,015610	Prob. F(1,4)	0,9066	
Obs*R-squared	0,023325	Prob. Chi-Square(1)	0,8786	
Scaled explained SS	0,021152	Prob. Chi-Square(1)	0,8844	
Test Equation Dependent Variable: ARESID Method: Least Squares Date: 06/07/25 Time: 17:05 Sample: 2019 2024 Included observations: 6				
Variable	Coefficient	Std. Error	t-Statistic	Prob.
Inflation	0,501911	3,640732	0,137860	0,8970
Unemployment	0,077592	0,621029	0,124941	0,9066
R-squared	0,003887	Mean dependent var		0,952980
Adjusted R-squared	-0,245141	S.D. dependent var		1,032082
S.E. of regression	1,151658	Akaike info criterion		3,381484
Sum squared resid	5,305264	Schwarz criterion		3,312070
Log likelihood	-8,144451	Hannan-Quinn criter.		3,103616
F-statistic	0,015610	Durbin-Watson stat		2,603958
Prob(F-statistic)	0,906597			

Testing to detect heteroscedasticity was carried out using the Glejser method. The test results showed a probability value of F-statistic of 0.906597. Given that this value is far above 0.05,

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it can be concluded that this model does not have a heteroscedasticity problem, so the assumption of homoscedasticity is considered to have been met.

Table 6. Multicollinearity Test (Variance Inflation Factor/VIF)

Variance Inflation Factors				
Date: 06/07/25	Time: 17:06			
Sample: 2019 2024				
Included observations: 6				
Variable	Coefficient Variance	Uncentered VIF	Centered VIF	
Inflation	26,92077	59,96278	NA	
Unemployment	0,783309	59,96278	1,000000	

To identify the possibility of multicollinearity, the Variance Inflation Factor (VIF) value was applied. The results found showed that for the unemployment variable, the VIF obtained was 1.000000. This figure is still far below the general limit that is usually set, which is 10, so it can be concluded that there is no indication of multicollinearity in this model. The results of the regression analysis for 2019 to 2024 show a negative relationship between the inflation rate and unemployment, with a coefficient value of -0.191571. This relationship is in line with the Phillips curve theory which indicates a trade-off between inflation and unemployment. However, statistically, this relationship does not show significance, which suggests that there is not enough empirical evidence to support a strong relationship between inflation and unemployment in Indonesia during that period.

This lack of significance may be triggered by various structural and external factors that have an impact on the national economy. Growth in the informal sector and the digital economy, changes in people's consumption habits, and the implementation of price control policies have changed the way inflation and unemployment interact. On the other hand, inflationary pressures during this period were more controlled by global factors, such as the impact of the COVID-19 pandemic that disrupted the global supply chain and the conflict between Russia and Ukraine that caused a spike in energy and food prices.

Domestic monetary and fiscal policies also contributed to this result. Bank Indonesia adopted a loose monetary policy by lowering interest rates and increasing liquidity to encourage economic growth. The government also implemented an expansionary fiscal policy through the National Economic Recovery (PEN) program, social assistance, and tax incentives to address the spike in unemployment. At the same time, various price control policies including energy subsidies and supervision of food distribution also helped lower the inflation rate. With these policies, inflationary pressures did not entirely come from domestic demand factors that are usually related to the unemployment rate. Therefore, the combination of external factors and domestic policies provides an explanation for the insignificant relationship between inflation and unemployment during the period 2019 to 2024, which does not reflect the classical pattern as described in traditional economic theory.

Table 7. Comparative Analysis

Period	Inflation	Unemployment Rate (%)	Conclusion
Pre-Pandemic	Stable (2.72%)	Low (5.23%)	Economy was normal and stable.
During Pandemic	Low (< 2%)	High (> 6%)	Weak purchasing power, unemployment surged.

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Post-Pandemic	Rising (stable)	Dropped significantly	Economy recovered, job market improved.

Pre-Pandemic (2019): The inflation rate was recorded at 2.72% and open unemployment (TPT) was at 5.23%. This inflation reflects price stability, while the relatively low TPT indicates good economic conditions and job availability. Pandemic Period (2020-2021): During the pandemic period, inflation dropped significantly below 2% from 1.68% in 2020 and 1.87% in 2021, reflecting weakening purchasing power and declining purchasing interest. Meanwhile, TPT increased to 7.07% in 2020 due to the implementation of PSBB, layoffs, and restrictions on economic activities, then slightly improved to 6.49% in 2021, although still higher than before the pandemic. Post-Pandemic (2022-2024): Inflation jumped in 2022 to 5.51% due to rising energy and basic necessities prices. However, TPT continues to decline, indicating economic recovery and job creation. In 2023 and 2024, inflation stabilizes again, falling to 1.57% in 2024. TPT also improved to 4.91%, lower than the 2019 figure.

Rethinking the Inflation

The econometric insignificance of Phillips Curve in Indonesia within the period of 2019-2024 could not be written off as an econometric incident. It is a sheer condemnation of the current macroeconomic orthodox. The fact of the inability of the curve to predict and explain the correlation between the inflation and unemployment in one of the largest emerging economies of Southeast Asia at the time of the enormous economic dislocation indicates the exhaustion of the broader concept. Over the past twenty years, the notion of the Phillips Curve was taken by economists as the indisputable fact- an inverse connection between the inflation and unemployments, which rested on the dynamics of the wage-push inflation, and tightness in the labor markets. Nevertheless, the Indonesian example does not display a mere flattening of such a curve (as it is proposed by Blanchard, 2021) but an outright breakdown of coherence of its structure. The relation between inflation and unemployment is no longer a matter of predictable trade off anymore, instead they both appear to take their own separate courses steered by different forces. This implies requiring a change of perspective on the causal structure of macroeconomic dynamics in disrupted and structurally varied economies.

The traditional Phillips Curve is based on a list of assumptions that are no longer valid within the economy of Indonesia. The core of the model lies in the sentiment that the level of wages and prices is closely connected through labor market laxity. But this assumes that there is a formalized labor market and that the negotiation of wages occurs in a transparent process and that the institution enforces an inflexible wage level, none of which is the case in a country with more than half of the labor force working through informal labor provision (ILO, 2023). Informal employment is normally not well paid, not contracted and has been characterized by extreme flexibility outside the boundaries of normative collective bargaining or minimum wage arrest. According to Allen (2015), Indonesian unemployment statistics tend to misreport other underlying modalities, including underemployment, disguised employment, and seasonal unemployment that are of supreme importance in a developing country. This informality in the structure gives wages protection against the types of frictional pressure that the model of the Phillips Curve is based on. As a result, inflation now is no longer passed through the channels of wages, and the so-called feedback relationship between prices and the labour market conditions is broken. What causes the inflation in Indonesia rather than wage overheating, as Langdana (2022) confirm, includes unstable dessert commodities, imports, and infrastructural inefficiencies.

Indonesia is not the only country to experience such disconnection, but the structural peculiarities enhance the given phenomenon. In America even, Bernanke & Blanchard (2023)

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noted that during the COVID-19 period inflation was generated by a set of supply-side shocks a large enough amount of which were hard to explain with a conventional Phillips Curve approach. The same result by Ball et al. (2022) showed that the inflation that prevailed in the G7 economies in this period had minimal relationships with unemployment dynamics. All these readings raise a concern of whether unemployment rate is still an applicable predictor of inflation, even in the most ordered economies. Expecting the linear negative relationship is not only wrong, it is empirically false in the context of Indonesia with the monetary transmission mechanism weakened by financial exclusion (Ardiansyah, 2023) and the high degree of segmentation present in the labor market. Indonesian economy structural form, dualism in labor markets to unstable fiscal reliance on energy price subsidies, can not be followed by the stability-oriented logic supported by the Phillips model.

In this respect, it should be emphatically noted that failure of Phillips Curve in this research is not a technical aberration but a result of universalizing methodology going awry as it were. That macroeconomic relations worked out in the North Atlantic world during the era of industrialization can be wholesale imported into structurally dissimilar economies has long been the subject of jibes by economists, such as Rodrik (2015) and Deaton (2010). The Phillips Curve has however continued to dominate macroeconomic textbooks and modelling in developing economies despite conclusive evidence that the underpinning assumptions are not valid in these environments. In Indonesia the level of inflation is presented by supply discontinuity or breakdowns of fuel, food imports, logistics blockages, weather shocks as opposed to the surfeit of demand or the surfeit of wages. The research conducted by Wahyuni (2022), Arifin (2022), and Qiu et al. (2012) proves the greater explanation of fuel price changes, supply-demand limitation, and administered prices over inflationary tendencies in comparison with any labor market indicator. The continuation of the obsolete models, in that sense, signifies neither the testament to their empirical soundness nor the testament to intellectual laxity but rather the testament to intellectual stagnation or rather intellectual inertia, a knack-up to acquiring a more pluralistic and context-specific economic epistemology.

Just as troublesome is the use of too much unemployment as satisfactory measure of the slack in the labor market. The Indonesian unemployment rate based on BPS surveys excludes the dynamics of the informal sector, as well as the volatility of the labor force participation, under employment, and discouraged workers. These exceptions disfigure the actual measure of labor market distress. As Ravallion (2020) and Singer (2016) demonstrate in their research papers on the subject of poverty in the context of labor statistics, structural dualism in developing nations makes them empirically weak and theoretically misleading standard employment indicators. When the driver or main independent variable in any regression model is not well measured or specified, one should not be surprised by the fact that the variable does not explain anything. However, even more damaging, making such a variable a policy instrument, based on the assumption that the unemployment will reduce and the inflation increase, or vice versa, runs the risk of generating counter-productive outcomes. An ineffective model, in this case, the Phillips Curve, turns into a deadly one.

Moreover, at present the anchoring of inflation expectations in Indonesia is no longer firmly anchored in relation to the moves in wages or in monetary signaling. Modern-day inflation and its persistence based on expectation dynamics are explored quite heavily by such sources as Gordon (2018) and Brenner (2006), which have stated that this persistence in situations when the economy is open to the rest of the world and liable to global price pressure. The odd thing is that hopes in Indonesia are now Conditioned by government communication policies, administrative price controls and anticipatory consumer behavior, rather than wage increases. This expectation control policy of the energy subsidy policies, the rice price stabilization

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programs, and the artificial price ceilings of necessities, the realities of the labor markets being decoupled with inflation, is achieved through these types of policies. The inflationary tendency is curbed as households anticipate the government to regulate prices even when commodity prices globally increase, as in the case of Umeaduma & Dugbartey (2023), the author demonstrates regardless of the state of employment dynamics. In Indonesia, it is the state and not the market that has emerged as a key inflation anchor.

Even intelligent attempts to rescue the Phillips Curve via elaborate econometrics do not solve this empirical marriage break up. Other authors such as Hasanli (2024), Önder (2009) have tried to reinstate the Phillips relationship by applying regime-switching models, nonlinearity corrections and time varying parameters. The problem is that, in spite of these methods enhancing model fit, they still hold to the premise that unemployment is explanatorily salient to inflation- an assumption that is clearly rejected by this work. The stability of inflation in 2010s and 2020s can be more explained by the anchored expectations and the impulse of the global economy, rather than by the domestic labor slack, as Eggertsson & Kohn (2023) and Stock & Watson (2020) found. Although these criticisms are technically oriented, they tend to reach the same conclusion: Phillips Curve has taken the explanatory end game.

Indonesia especially proves that more inflation is becoming a matter of non-market forces. State interventions state interventions: the National Economic Recovery (PEN) program, the cash transfer policy subsidies and food distribution channels that either directly keep the prices down or inflate them substantially. These are implemented in form of fiscal monetarism whereby state behavior substitutes classical market signaling. Weller (2022) observes that the contemporary management of inflation is more administrational than monetary, which Tingle (2023) refers to as the process of price governance. In Indonesia where populism and pressure groups in the civil service are juxtaposed with autonomy of central banks, inflation results are as much physical as political. The Phillips Curve cannot see this political economy of inflation, which supposes that market rather than ministries establish the prices.

Considering those facts, the policymakers will have to get rid of the deprecated culture of using Phillips Curve as a panoptical tool of a monetary and fiscal policy. What Indonesia requires is a new macroeconomic frame work, a more institutional based, empirically based and structurally flexible one. Examples of variables that have to be included in this framework include global input price indices, the stringency of supply chains, the dependence of energy imports, infrastructure of logistics, and multipliers of fiscal transmissions. It should also come up with more sophisticated indicators of the labor market that includes the informality levels, underemployment levels, and the participation levels that are dissected by gender and region. It is not the objective to substitute the Phillips Curve with a bigger framework but rather to shift to a modular, empirical and policy sensitive set of tools, capable of being flexible to adapt to the terrain it attempts to measure.

Conclusion

This study found that between 2019 and 2024, the relationship between inflation and unemployment in Indonesia shows a negative direction, in accordance with the Phillips Curve principle, but has no statistical significance. This shows that the classical Phillips Curve model is no longer adequate to explain Indonesia's macroeconomic conditions, especially after the COVID-19 pandemic. One of the main contributing factors is inflation that is more caused by the supply side, which is affected by global supply chain disruptions, energy price spikes, and geopolitical tensions on a global scale. The government's role in managing inflation through subsidies, social assistance programs, and price regulation also contributes to confusion about the traditional relationship between inflation and unemployment. In addition, the pandemic has

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triggered structural changes in the economy, such as the rise of the digital economy, shifts in consumption patterns, and transformations in the world of work, which make the old assumptions in the Phillips Curve increasingly irrelevant. Therefore, from a theoretical perspective, the results of this study indicate the need to adjust the Phillips Curve model to better reflect the current economic reality. From a policy perspective, these results serve as a reminder for policymakers to no longer rely entirely on the classical approach when formulating national macroeconomic strategies.

Based on the research results, it is recommended that the government direct future economic policies to control inflation from the supply side, through stabilizing energy and food prices, improving the national supply chain, and increasing efficiency in the logistics sector. Strengthening the labor market is also very important through skills training, support for informal sector workers, and digitalization of micro, small, and medium enterprises to create more and sustainable jobs. In facing external pressures and domestic changes, it is necessary to build synergy between fiscal and monetary policies in a more flexible and responsive manner, not only relying on the methods commonly used. For researchers, new approaches such as non-linear or time-varying models are suggested to be more effective in capturing structural changes in the economy. Further research also needs to use data from the sector or micro level and take into account global and social factors such as exchange rates, international goods prices, and economic inequality, so that the analysis of the relationship between inflation and unemployment in Indonesia becomes more comprehensive and precise.

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