



Global and Domestic Drivers of Inflation Dynamics in ASEAN: Evidence from Panel Econometric Analysis

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ABSTRACT

Purpose: This study aims to analyze the determinants of inflation in ASEAN countries by integrating institutional, monetary, and external factors into a unified empirical framework. The post-COVID-19 inflation surge and global supply chain disruptions underscore the importance of understanding inflation dynamics in emerging ASEAN economies.

Design/methodology/approach: This study employs a quantitative panel data approach covering the period 2005–2024. Panel data regression analysis was conducted, preceded by Chow, Hausman, and Lagrange Multiplier tests, which identified the Random Effect Model as the most suitable for the analysis.

Findings: The empirical results indicate that both domestic and global factors significantly affect inflation in ASEAN countries. Central bank independence (CBI), exchange rates, policy interest rates, unemployment, and world oil prices have a significant impact on inflation, whereas money supply and global supply chain pressures are not statistically significant.

Practical implications: The findings provide guidance for policymakers in ASEAN to maintain price stability by strengthening central bank independence, enhancing monetary policy credibility, and effectively managing external risks, particularly energy price shocks.

Originality/value: This study contributes to the macroeconomic literature by offering a comprehensive empirical analysis of inflation determinants in ASEAN, highlighting the interplay between domestic macroeconomic fundamentals and global shocks in shaping inflation behavior.

Keyword: *Inflation, Central Bank Independence, Policy Rate, Global Oil Price*

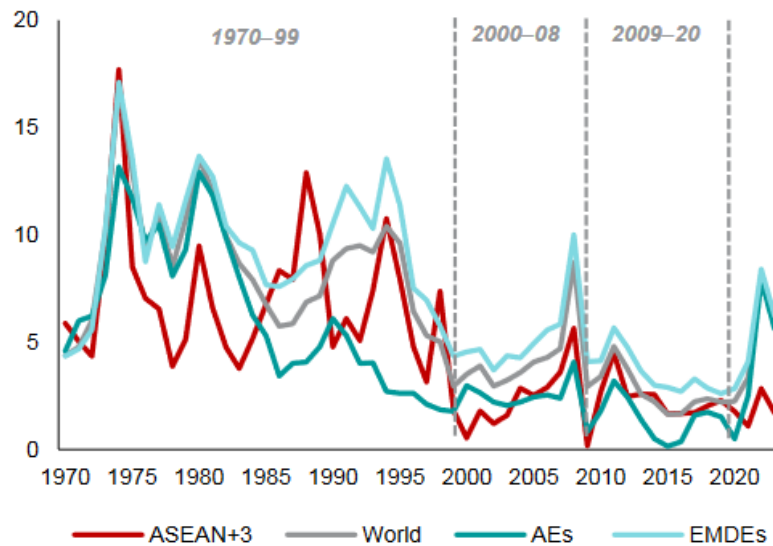
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A. INTRODUCTION

Inflation in ASEAN countries has experienced substantial fluctuations over the past five decades (Trinh & Nhan, 2023). During the 1970s and 1980s, ASEAN economies faced exceptionally high inflation, with average annual rates exceeding 15% due to structural imbalances, weak monetary institutions, and volatile commodity markets (Nookhwun & Waiyawatjakorn, 2024). Following the Asian Financial Crisis in 1997–1998, ASEAN countries implemented significant institutional and structural reforms (Clarke, 2024). These included the adoption of inflation-targeting frameworks, strengthening of central bank independence, and fiscal consolidation measures (Marafa, 2024). As a result, average inflation in the region declined to around 3–4% annually between 2000 and 2019, marking a

prolonged period of low and stable inflation (Ha, Kose, & Ohnsorge, 2022). This period reflects the successful anchoring of inflation expectations through improved monetary governance and enhanced credibility of central banks across ASEAN countries (Ali et al., 2025).



Source : (World Bank, AMRO staff calculations)

Figure 1. Consumer Price Inflation (Percent, year-on-year)

However, the COVID-19 pandemic triggered a dramatic shift in inflation dynamics across the region. From 2020 to 2022, ASEAN economies experienced a sharp rise in inflation, with the regional average reaching 7.2% in 2022 (Cline, 2023). Notably, the Philippines and Indonesia recorded year-on-year inflation rates exceeding 8%, while Malaysia and Thailand experienced rates above 5% (Dacuycuy, 2021). Approximately 55% of ASEAN economies reported inflation rates above historical averages, highlighting the region's vulnerability to global shocks and supply chain disruptions (Platitas & Ocampo, 2025). The surge in inflation reflects a combination of recovering domestic demand, tight labor markets, disruptions in global supply chains, and the rebound of energy prices from their pandemic lows. In particular, ASEAN's reliance on energy imports and integration into global trade networks amplified the effects of external shocks, leading to faster inflationary pressures than observed in other emerging regions (Chidimma Maria-Gorretti Umeaduma, 2022).

Understanding the determinants of inflation in ASEAN is critical for effective macroeconomic policy (Trinh & Nhan, 2023). Existing literature identifies both domestic and global drivers of inflation. Domestic factors include central bank independence (CBI), monetary aggregates such as money supply, policy interest rates, exchange rate volatility, and labor market conditions, particularly unemployment. Empirical evidence suggests that higher central bank independence is associated with lower inflation: found that a 10% increase in CBI scores reduces inflation by 1.2 percentage points in developing countries. Monetary variables, such as the money supply, also exert varying effects on inflation depending on the country context; historical cases such as Germany in 1922–1923 illustrate demand-pull inflation caused by excessive monetary expansion (Anwar, 2023). Exchange rate volatility affects domestic price levels through changes in import costs. For instance, the appreciation

of the Kuwaiti riyal contributed to reducing inflation in Kuwait by lowering the domestic cost of imports. Labor market conditions, captured through the Phillips curve framework, reveal a non-linear relationship between unemployment and inflation. While traditionally lower unemployment is expected to increase inflation, the sensitivity varies across time and economic conditions, emphasizing the importance of context-specific analysis (Muhammad, 2023).

Global factors further complicate inflation dynamics in ASEAN economies. Global commodity price fluctuations, particularly oil prices, exert direct and indirect effects on domestic inflation (Suciany, Damayanti, & Darmawan, 2024). Empirical studies suggest that a 1 USD increase in global oil prices raises ASEAN average inflation by approximately 0.15 percentage points. Supply chain disruptions also act as significant inflationary pressures, as highlighted during the COVID-19 pandemic, when shortages of raw materials and logistics constraints led to accelerated price increases in consumer goods and services (Mishra, Dash, & Padhan, 2024). These global shocks interact with domestic factors, illustrating that inflation in small, open ASEAN economies is increasingly determined by the interplay between internal macroeconomic fundamentals and external pressures (Arrafi Juliannisa & Artino, 2022).

Despite substantial prior research, key gaps remain. Most existing studies either focus exclusively on domestic or global determinants or rely on single-country time series analyses, limiting their applicability to the ASEAN regional context (Elmassah, 2024). Additionally, the interaction between institutional quality, monetary policy, labor market conditions, and global shocks has not been empirically tested in a unified framework for ASEAN economies (Sahnoun & Abdennadher, 2023). Given the region's heterogeneous monetary institutions, differential exposure to global markets, and varying structural conditions, a comprehensive analysis integrating both domestic and global determinants is necessary to understand inflation transmission mechanisms effectively (Mergel, 2012).

This study addresses these gaps by employing a panel econometric framework to analyze the determinants of inflation in ASEAN countries from 2005 to 2024. The study is theoretically grounded in the New Keynesian Phillips Curve (NKPC) theory, which links inflation to expectations, output gaps, and labor market conditions (Saqib, 2025). By incorporating institutional, monetary, labor market, and global factors into a single analytical framework, this study provides a more comprehensive understanding of inflation dynamics in developing economies and offers insights that are directly relevant to policymakers navigating complex global and domestic conditions (Sahnoun & Abdennadher, 2023). The objectives of this study are fourfold:

1. To quantify the impact of domestic institutional and monetary variables, including central bank independence, money supply, policy interest rates, and labor market conditions, on inflation in ASEAN countries.
2. To assess the influence of global factors, particularly oil prices and supply chain pressures, on regional inflation.
3. To compare the relative contributions of domestic versus global factors in shaping ASEAN inflation dynamics.
4. To provide evidence-based policy recommendations for maintaining price stability amid rising global uncertainty.

The novelty of this study lies in its integration of domestic and global determinants of inflation into a single panel framework, capturing both cross-country heterogeneity and temporal dynamics, and applying the NKPC theory in a regional ASEAN context (Furuoka, Pui, Chomar, & Nikitina, 2023). This approach addresses existing research gaps, enhances understanding of inflation transmission mechanisms in emerging economies, and informs regional macroeconomic policy design to strengthen resilience against both domestic and external shocks.

B. THEORETICAL STUDY

1. Central Bank Independence and Inflation

A number of empirical studies highlight the significant role of central bank independence (CBI) in controlling inflation, although its effectiveness is highly contingent on the institutional and macro-financial context of the country (Garriga & Rodriguez, 2023). Agoba, Abor, Osei, and Sa-Aadu (2017) found strong evidence that an increase in the legal independence of central banks is associated with a decrease in inflation, with this effect being more pronounced in countries with higher levels of democracy (Elgin & Öztunall, 2024). Their study also demonstrated that all dimensions of the CBI index including personnel autonomy, policy objectives, operational independence, and financial autonomy contribute to lowering inflation. These findings imply that legal and institutional reforms aimed at strengthening central bank independence can effectively reduce average inflation in developing countries (Bogari, 2020). Moreover, other studies in Asia indicate that the negative correlation between CBI and inflation is influenced by the development of the financial sector and the quality of institutions, suggesting that central bank independence alone may not be sufficient to curb inflation without a supportive institutional framework.

Similarly, research conducted in 48 African countries between 1970 and 2012 found that higher central bank independence reduces inflation more effectively when accompanied by a well-developed banking sector and strong institutional quality (Gojčaj, 2025). Conversely, in some studies, particularly in Africa and developing nations, central bank independence alone does not significantly reduce inflation, highlighting the importance of complementary financial and institutional development. Additionally, the development of stock markets can enhance the effectiveness of central banks in both developed and developing countries (Lim, 2021). Studies in the MENA region further confirm that increased central bank independence tends to lower inflation rates, and institutional factors can amplify this effect. However, contrasting evidence from cross-country analyses of 100 countries (1980–2005) suggests that the negative relationship between CBI and inflation is not universally significant, and meaningful impacts are observed only in select countries, particularly those with fully democratic or partially autocratic regimes (Garriga & Rodriguez, 2023). Overall, the literature underscores that both the transparency and operational independence of central banks are critical determinants of their capacity to achieve price stability.

2. Inflation Drivers in Turkey

Kocoglu, (2023) investigated the factors driving inflation in Turkey using a structural vector autoregression (SVAR) model, providing insights into both domestic and

global determinants of price dynamics (Yilmazkuday, 2022). The study revealed that Turkish inflation responded significantly to negative interest rate shocks, highlighting the sensitivity of domestic prices to monetary policy adjustments. In addition, external factors, such as rising global oil prices and fluctuations in exchange rates, were found to exert strong upward pressure on inflation. The research also indicated that the depreciation of the Turkish lira could be mitigated through policy interventions that raise interest rates, suggesting that conventional monetary policy tools, particularly interest rate adjustments, remain optimal for maintaining price stability in the Turkish context (*Drivers Food Price Inflat. Turkey*, 2020). This study emphasizes the dual role of domestic monetary policy and external shocks in shaping inflationary trends in emerging markets.

3. Inflation Dynamics in ASEAN Countries

Suidarma et al., (2023) analyzed inflation dynamics in ASEAN countries from 2005 to 2018 using the New-Keynesian Phillips Curve (NKPC) framework combined with the Generalized Method of Moments (GMM) (Hidhiir, Ahmad, Junoh, & Yusof, 2024). Their findings demonstrated that changes in inflation were not solely determined by inflation expectations, as traditionally assumed. Instead, inflation dynamics were influenced by multiple macroeconomic factors, including output gaps, changes in money supply, and exchange rate movements. The study highlights that domestic economic conditions, alongside monetary and fiscal policies, interact to shape inflation in ASEAN economies (Choirunnisa & Yusfi, 2025). By applying the NKPC model, the research provides a comprehensive understanding of how both demand-pull and cost-push factors contribute to price fluctuations, thereby offering policymakers a nuanced perspective on managing inflation in emerging Southeast Asian economies.

4. Unconventional US Monetary Policy and Developing Countries

Tran & Pham, (2020) examined the spillover effects of unconventional US monetary policy on developing countries, categorizing them into those that implement inflation targeting and those that do not. The study revealed that US monetary policy indirectly affects inflation in developing economies through channels such as exchange rates and domestic policy interest rates (Alekseievska*, Kyfak, Rodionova, & Yakubovskiy, 2019). For instance, changes in US interest rates and unconventional monetary measures can alter capital flows, currency valuations, and ultimately aggregate demand, influencing domestic price levels (Jaswal & Ahuja, 2024). The study concludes that the effectiveness of local monetary policy in managing inflation is partly shaped by external monetary shocks, highlighting the interconnectedness of global financial systems and the need for developing countries to consider international monetary dynamics when formulating domestic inflation strategies.

5. Oil Prices, Exchange Rates, and Inflation in G20 Countries

Bigerna, (2023) explored the dynamic interactions between oil prices, exchange rates, and inflation across 15 G20 countries from 2010 to 2021 using a Vector Autoregression with exogenous variables (VARX) model. The study found that the impact of oil prices on inflation is asymmetric and depends on the direction of price changes and specific time periods (Carstensen & Salzmann, 2017). Declining oil prices were more influential for oil-exporting countries than for oil-importing nations, while the

magnitude of the effect was stronger in larger economies compared to smaller ones. Additionally, the research demonstrated that global crises, such as the COVID-19 pandemic, significantly altered the relationships among oil prices, exchange rates, and inflation, indicating that external shocks can disrupt typical inflation dynamics (Tan, 2020). This study underscores the importance of considering both global commodity price movements and external shocks when analyzing inflation trends in major economies.

6. Unemployment and Inflation in Greece

Pegkas, (2024) investigated the relationship between unemployment and inflation in Greece using the Nonlinear Autoregressive Distributed Lag (NARDL) method. The study revealed an asymmetric and inverse relationship between inflation and unemployment. In the long term, rising unemployment tends to reduce inflation more strongly than the inflationary effects of declining unemployment (Dritsaki & Dritsaki, 2012). However, in the short term, the trade-off between unemployment and inflation is relatively linear, with inflation responding more sensitively to economic conditions, particularly during periods of economic growth (Barkoulas & Chionis, 2024). These findings suggest that both policymakers and economists should account for asymmetries in the inflation-unemployment relationship, as short-term and long-term dynamics may differ significantly.

7. Inflation in Sri Lanka

Malaviarachchi & Korale-Gedara, (2025) analyzed the determinants of inflation in Sri Lanka from 2020 to 2024 using a structural vector autoregressive (SVAR) model. Their study demonstrated that both domestic and global factors significantly influence inflation, with the growth rate of money supply, exchange rate fluctuations, and global supply chain disruptions being primary drivers (De Alwis & Dewasiri, 2021). The research also highlighted that long-term volatility in Sri Lanka's inflation rate is largely explained by movements in money supply and exchange rates, indicating that monetary stability and currency management are crucial for price stability (Selvanayagam & Mustafa, 2018). This study provides comprehensive evidence of the multifaceted nature of inflation in small emerging economies and emphasizes the need for policymakers to monitor both domestic monetary aggregates and external shocks.

C. METHODOLOGY

This study is a quantitative study using panel data that aims to examine the causal relationship between global and domestic determinants and inflation rates in ASEAN countries (Putranto, 2022). An explanatory research approach is used to provide an empirical explanation of how domestic macroeconomic variables such as central bank independence, money supply, exchange rates, policy interest rates, and unemployment rates, as well as global factors such as global oil prices and global supply chain pressures, affect inflation dynamics in the region (Radjab, Enny Jam'an, 2017).

The research population includes all ASEAN member countries that have consistent data availability during the observation period (Trinh & Nhan, 2023). The analysis time frame is determined based on the availability of macroeconomic data and global indicators published by international institutions such as the World Bank, BIS, Federal Reserve, and UNCTAD, thereby enabling a comprehensive and continuous

evaluation of inflation trends. The study period is from 2005 to 2024. The sample is determined using a purposive sampling approach, selecting countries that meet the following criteria: (1) availability of annual inflation data, (2) complete information on domestic macroeconomic indicators, and (3) availability of global determinant data during the observation period. A total of 10 ASEAN countries are included in the panel, resulting in a balanced panel dataset of 200 observations (10 countries × 20 years). This approach ensures that the sample aligns with the research objectives and maintains data reliability, following the recommendation of Sekaran & Bougie (2016) (Arrafi Juliannisa & Artino, 2022).

The sample selection was conducted using purposive sampling, which is the determination of analysis units based on certain characteristics in line with the research objectives, including the availability of inflation data, global determinants, and domestic fundamental indicators during the observation period. Yin, (2011) emphasize the importance of matching sample criteria with the research focus in order to obtain valid and reliable analysis results. The dependent variable used in the study is inflation. Meanwhile, the independent variables include domestic factors: central bank independence, money supply, exchange rate, policy rate, unemployment, global oil price, and global supply chain pressure index. The following table shows the operational definitions of the variables (Hermawan & Amirullah, 2021):

Table.1 Operational Definitions of the Variables

Jenis Variabel	Nama Variabel	Indikator	Sumber Data
Y	Inflasi (INF)	Inflation, consumer prices (annual %)	World Bank (WDI)
X1	Central Bank Independence (CBI)	Central Bank Independence Index	Garriga (2016)
X2	Money Supply (MS)	Broad money growth (annual %)	World Bank (WDI)
X3	Exchange Rate (ER)	Official exchange rate (LCU per US\$, period average)	World Bank (WDI)
X4	Policy Rate (PR)	Central Bank Policy Rate	Bank International Settlement (BIS) / World Bank
X5	Unemployment (UP)	Unemployment, total (% of total labor force) (modeled ILO estimate)	World Bank (WDI)
X6	Global Oil Price (GOP)	Europe Brent Spot Price FOB (\$ per barrel)	U.S Department of Energy, Energy Information Administration (EIA)
X7	Global Supply Chain Pressure (GSC)	Global Supply Chain Pressure Index	Federal Reserve Bank of New York

Based on the table above, the panel data regression model equation is as follows:

$$INF_{it} = \alpha + \beta_1 CBI_{it} + \beta_2 MS_{it} + \beta_3 ER_{it} + \beta_4 PR_{it} + \beta_5 UP_{it} + \beta_6 GOP_{it} + \beta_7 GSC_{it} + u_i + \varepsilon_{it}$$

Data analysis in this study was conducted using panel data regression analysis to examine the long-term effects of global and domestic determinants on inflation, taking into account time variations and the specific characteristics of each ASEAN country (Galvao, Parker, & Xiao, 2024). The selection of the best panel model was determined through a series of tests, namely the Chow Test, Hausman Test, and Lagrange Multiplier

(LM) Test, to identify whether the most appropriate model was the Common Effect Model (CEM), Fixed Effect Model (FEM), or Random Effect Model (REM). In addition, classical assumptions were tested to ensure that the resulting regression model was stable and reliable (Balázsi, Baltagi, Mátyás, & Pus, 2024). The conceptual framework is as follows:



Figure 1. Conceptual framework

D. RESULT

This section presents the results of secondary data analysis used in the study. The research data was obtained from various official sources in accordance with the characteristics of each variable, then processed and analyzed using statistical techniques that support the research objectives. The presentation of results focuses on empirical findings that show patterns, dynamics, and relationships between global and domestic determinants of inflation during the observation period. The analysis process includes descriptive statistical calculations, classical assumption testing, and estimation of predetermined regression models. The results of the analysis form the basis for a more in-depth discussion of the theoretical and policy implications in the next section. Table 2 summarizes the descriptive statistics of the variables, including the mean, median, minimum, maximum, and standard deviation. The descriptive table covers the sample size of the ASEAN country panel data for the 2005-2024 period.

Table 2. Descriptive Statistics

	INF	CBI	MS	ER	PR	UP	GOP	GSC
Mean	3.935960	0.519228	11.15379	4138.882	4.064589	3.280510	75.92208	0.022355
Median	2.975071	0.574000	8.846020	34.24772	3.375000	3.320000	71.34000	-0.267160
Maximum	35.02460	0.896000	49.10600	23271.21	13.99350	9.316000	111.6300	3.088790
Minimum	-1.610680	0.132000	-4.497416	1.249567	0.135833	0.249000	41.96000	-0.675134
Std. Dev.	4.905763	0.223369	8.902897	7352.755	3.420365	2.094448	22.21327	0.854532

Table 3. Multicollinearity Test

	CBI	MS	ER	PR	UP	GOP	GSC
CBI	1.000000	-0.328360	-0.211754	-0.110277	0.665752	0.026265	0.024680
MS	-0.328360	1.000000	0.306358	0.710472	-0.390746	0.078193	-0.146933
ER	-0.211754	0.306358	1.000000	0.425284	-0.116529	-0.016079	0.088462
PR	-0.110277	0.710472	0.425284	1.000000	-0.353979	0.078376	-0.159233
UP	0.665752	-0.390746	-0.116529	-0.353979	1.000000	-0.073512	-0.016793
GOP	0.026265	0.078193	-0.016079	0.078376	-0.073512	1.000000	0.113915
GSC	0.024680	-0.146933	0.088462	-0.159233	-0.016793	0.113915	1.000000

Table 3 presents the correlation results between independent variables in this study. Multicollinearity can be detected if the correlation coefficient between independent variables exceeds 0.85. Based on Table 3, it can be seen that the correlation between variables is <0.85 , so it can be concluded that all independent variables are free from multicollinearity.

Table 4. Random Effect Model

Variable	Coefficient	Std. Error	t-Statistic	Prob.
C	-0.492895	1.207747	-0.408111	0.6838
CBI	-5.725747	1.729696	-3.310263	0.0012
MS	-0.080691	0.043973	-1.834996	0.0686
ER	-0.000125	4.13E-05	-3.016087	0.0030
PR	1.371072	0.125409	10.93282	0.0000
UP	0.410915	0.184659	2.225267	0.0277
GOP	0.024867	0.011763	2.114009	0.0363
GSC	0.377936	0.315253	1.198835	0.2326
R-squared	0.601605	Mean dependent var		3.935960
Adjusted R-squared	0.581826	S.D. dependent var		4.905763
S.E. of regression	3.172378	Sum squared resid		1419.021
F-statistic	30.41714	Durbin-Watson stat		1.267883
Prob(F-statistic)	0.000000			

The estimation results in Table 4 show that the Random Effect model used in this study has met statistical validity. The F-statistic value of 30.41714 with Prob(F-statistic) = 0.0000 indicates that all independent variables, both those reflecting domestic and global factors, simultaneously have a significant effect on the dependent variable. Thus, this model can be considered capable of explaining the relationship between variables as a whole..

The coefficient of determination shows an R-squared value of 0.601605 and an Adjusted R-squared value of 0.581826. This means that approximately 58.18% of the variation in the dependent variable can be explained by the independent variables included in the model. Although not very high, this value reflects that the model has adequate explanatory power, while the remaining 41.82% is influenced by other variables outside the model.

Partial analysis through t-statistic testing shows that several domestic variables have a significant effect on the dependent variable. Central Bank Independence (CBI) has a negative and significant effect ($p = 0.0012$), indicating that a higher level of central bank independence can reduce pressure on the dependent variable, such as inflation or economic instability. Exchange rate (ER) also shows a highly significant negative effect ($p = 0.0000$), indicating that exchange rate fluctuations play an important role in determining the dynamics of the dependent variable. In addition, policy rate (PR) has a positive and significant effect ($p = 0.0000$), indicating that changes in policy interest rates provide a direct response to the economic variables under study. Another domestic variable, unemployment (UP), proved to be significant ($p = 0.0267$), showing a positive relationship with the dependent variable.

In addition to domestic factors, the estimation results also confirm the role of external variables. Global oil price (GOP) shows a positive and significant effect ($p = 0.0363$), indicating that global oil price volatility is one of the important determinants

influencing the economic conditions of the sampled countries. On the other hand, several variables do not show a significant effect, such as money supply (MS), which is only close to significance ($p = 0.0686$), and global supply chain pressure (GSC), which has a relatively high p -value (0.2326), so that global supply chain pressure does not have a direct impact in this model.

The Random Effect Model estimation results show that the model has strong explanatory power, as reflected in the R-squared value of 0.6016 , which means that more than 60% of inflation variation can be explained by the independent variables used. In addition, the Prob (F-statistic) value of 0.0000 confirms that the model is significant overall at a 1% significance level, so that the simultaneous relationship between variables can be explained significantly.

E. DISCUSSION

The Central Bank Independence (CBI) variable has a negative and significant coefficient, indicating that a higher level of central bank independence contributes to a decline in inflation. This finding is consistent with empirical literature that emphasizes the importance of institutional independence in maintaining price stability. Dincer & Eichengreen (2013) found that countries with a high degree of central bank independence tend to have lower inflation, in line with findings Garriga & Rodriguez (2020) that greater central bank independence will reduce inflation. A study by Kunaedi & Darwanto (2020) also supports the existence of a negative relationship between central bank independence and inflation depending on the development of the financial sector and the quality of institutions in each country. This phenomenon is also reinforced by Agoba et al. (2017) who argue that the degree of central bank independence can be more effective in reducing inflation if accompanied by developments in the banking sector and high institutional quality. This shows that an increase in CBI plays an important role in strengthening the credibility of monetary policy.

Meanwhile, Money Supply (MS) does not have a significant effect on inflation, even though the coefficient is negative. This phenomenon can be explained by the fact that since the implementation of the inflation targeting framework, the effect of money supply on inflation has tended to weaken because central banks place more emphasis on controlling inflation expectations than on traditional monetary control. Mishkin (2019) and Benati (2008) noting that the relationship between money growth and inflation has weakened in countries that have adopted inflation targeting policies, so that these findings may explain the context of emerging Asian countries.

The Exchange Rate (ER) variable shows a negative and significant effect on inflation, which appears to contradict conventional theory regarding depreciation and inflation. However, this phenomenon can be explained by the low exchange rate pass-through in the Asian region, as found by Kassi et al. (2019) which shows that exchange rate changes are not fully passed on to domestic prices. Exchange rate depreciation and appreciation do not have the same impact on inflation in the short term. Exchange rate regimes and inflation play an important role, with countries with fixed exchange rate regimes and low inflation experiencing higher exchange rate pass-through. Meanwhile, countries with floating exchange rate regimes and high inflation show lower exchange

rate pass-through. Campa & Goldberg (2005) also emphasized that the degree of pass-through varies between countries, depending on the structure of the import market and stabilization policies.

Contrary to monetary theory expectations, the Policy Rate (PR) actually shows a positive and significant coefficient. This reflects the dynamics of endogeneity in monetary policy, where interest rate hikes are not the initial cause of inflation, but rather a response to inflationary pressures that have already emerged. In the context of ASEAN countries that implement an inflation targeting framework, the empirical relationship between the policy rate (PR) and inflation often shows a positive and significant coefficient, even though classical monetary theory suggests that interest rate hikes should suppress price pressures. This positive coefficient does not reflect that higher interest rates causally cause inflation to increase, but rather indicates the endogeneity of monetary policy in which central banks systematically raise interest rates in response to already increased inflation or rising inflation expectations. Modern monetary policy reaction function frameworks, such as the Taylor rule, emphasize that interest rate decisions are formulated as a function of the difference between actual inflation and the inflation target, as well as the output gap, so that the policy response will be intense when inflation is above target.

The Unemployment Rate (UP) variable has a positive and significant effect on inflation, indicating a weakening of the Phillips curve in emerging Asian countries. This finding is in line with Pegkas (2024) states that unemployment contributes to inflation in the long term, while in the short term, declining unemployment can increase inflation.

Furthermore, Global Oil Price (GOP) has a positive and significant effect on inflation. This result is also in line with studies by Yilmazkuday (2022) Inflation was also driven by rising global oil prices. Study by Bigerna (2023) shows that the impact of oil prices can vary depending on the direction of change and the specific time period. The impact of falling oil prices tends to be more significant for oil-exporting countries than for oil-importing countries. The impact is also stronger in countries with large economies than in smaller countries.

Conversely, the Global Supply Chain Pressure Index (GSC) did not have a significant effect on inflation despite having a positive coefficient. This condition may have occurred because emerging Asian countries were relatively quick to recover their supply chains after the pandemic and had more flexible import diversification capabilities. Maechler (2024) found that global supply chain pressures do not have a symmetrical impact on inflation across countries, while Swallow et al (2022) stating that the supply chain effect is more dominant in developed countries.

Overall, the results of this study confirm that a combination of domestic factors, particularly central bank independence, policy interest rates, and labor market conditions, as well as global factors such as oil prices, are the main determinants of inflation in emerging Asian countries. These findings expand the empirical evidence on modern inflation dynamics in the region, while supporting international literature focusing on monetary policy, institutional effectiveness, and the transmission of global shocks to inflation.

The Central Bank Independence (CBI) variable has a negative and significant coefficient, indicating that a higher level of central bank independence contributes to a decline in inflation. This finding is consistent with empirical literature emphasizing the importance of institutional independence in maintaining price stability. Countries with higher degrees of central bank independence tend to experience lower inflation, as they are better able to resist political pressures that could compromise monetary policy (Dincer & Eichengreen, 2013; Garriga & Rodriguez, 2020). In practical terms, this implies that ASEAN policymakers should continue to strengthen the legal and operational autonomy of central banks, ensuring that monetary policy decisions are insulated from short-term political considerations. Enhancing central bank credibility can improve public confidence in inflation management, which in turn stabilizes expectations and reduces macroeconomic volatility.

Meanwhile, Money Supply (MS) does not show a significant effect on inflation, despite having a negative coefficient. This may reflect the limited role of monetary aggregates under an inflation-targeting framework, where central banks focus on managing expectations rather than directly controlling money supply. This finding suggests that policymakers in ASEAN countries should prioritize communication and expectation management tools, such as forward guidance and transparent policy frameworks, rather than relying solely on traditional monetary instruments.

The Exchange Rate (ER) shows a negative and significant effect on inflation, which may seem contrary to conventional theory. However, this result can be explained by the low exchange rate pass-through observed in the region, particularly in countries with floating exchange rate regimes and relatively stable inflation levels. This indicates that ASEAN policymakers must carefully consider the structural characteristics of their economies when designing exchange rate policies, as currency fluctuations may not immediately translate into domestic price changes.

Contrary to classical monetary theory, the Policy Rate (PR) exhibits a positive and significant coefficient. This reflects the endogeneity of monetary policy, where interest rate adjustments respond to pre-existing inflationary pressures rather than causing them. ASEAN central banks that operate under inflation-targeting frameworks often raise policy rates reactively when inflation exceeds target levels, consistent with Taylor rule dynamics. The practical implication is that policymakers should use interest rate changes as part of a comprehensive policy toolkit, carefully considering timing and magnitude to avoid unintended consequences for economic growth.

The Unemployment Rate (UP) has a positive and significant effect on inflation, suggesting a weakening of the traditional Phillips curve in emerging Asian economies. This indicates that structural labor market factors and other non-wage pressures are increasingly influential in shaping inflation dynamics. Policymakers should therefore complement monetary policy with labor market interventions, social safety nets, and productivity-enhancing programs to mitigate inflationary pressures without adversely affecting employment.

Global factors also play a crucial role. Global Oil Price (GOP) has a positive and significant impact on inflation, reflecting ASEAN countries' reliance on energy imports. This finding highlights the vulnerability of domestic prices to external shocks and

underscores the importance of energy diversification, strategic reserves, and regional cooperation to buffer against oil price volatility. Conversely, the Global Supply Chain Pressure Index (GSC) is not statistically significant, suggesting that post-pandemic recovery and flexible import strategies have allowed ASEAN economies to better absorb global supply chain disruptions. Nonetheless, policymakers should remain vigilant to potential external shocks, such as geopolitical tensions or climate-related supply constraints, which could affect inflation in the future.

Overall, these findings have several theoretical and practical implications. Theoretically, they extend the New Keynesian Phillips Curve framework by demonstrating how institutional quality, monetary policy, labor market conditions, and global shocks jointly determine inflation in a regional ASEAN context. Practically, the results provide guidance for policymakers to design holistic inflation management strategies that integrate domestic institutional strengthening, responsive monetary policy, labor market interventions, and risk mitigation against global price shocks. Future research could expand this framework by including sectoral or high-frequency data, additional global determinants, or comparative studies across emerging regions to further refine understanding of inflation dynamics under complex global and domestic conditions.

F. CONCLUSION

This study demonstrates that inflation in ASEAN emerging economies is influenced by both domestic and global factors. Among domestic determinants, central bank independence (CBI) is the most significant, underscoring the importance of credible and autonomous monetary policy. Exchange rates also play a notable role in reducing inflation, while money supply shows no significant effect. Policy interest rates exhibit a reactive relationship with inflation, and unemployment presents a weak Phillips Curve effect, suggesting structural inflationary pressures. Globally, world oil prices are a key driver of inflation due to ASEAN countries' dependence on energy imports, whereas global supply chain pressures have a limited impact, reflecting resilient post-pandemic supply chains.

Despite providing valuable insights, this study has several limitations. First, it relies on country-level panel data, which may overlook sectoral or subnational variations in inflation dynamics. Second, the analysis focuses on selected domestic and global factors, potentially excluding other relevant influences such as geopolitical risks, extreme climate events, or fiscal policy changes. Finally, the study period may not fully capture long-term structural shifts in ASEAN economies.

Future studies should address these limitations by incorporating higher-frequency or sector-specific data to capture more granular inflation dynamics. Expanding the range of global and domestic determinants, including fiscal policy, climate shocks, and geopolitical risks, could enhance understanding of inflation drivers. Additionally, comparative studies across emerging regions could provide further insights into the relative effectiveness of monetary institutions and policy interventions in maintaining price stability under global uncertainty.

REFERENCES

- Alekseievskaya*, H., Kyfak, A., Rodionova, T., & Yakubovskiy, S. (2019). Modeling Outcomes of Unconventional Monetary Policy. *International Journal of Recent Technology and Engineering (IJRTE)*. <https://doi.org/10.35940/ijrte.d4503.118419>
- Ali, M., Raza, S. A., Abdul Wahab, N. S., Puah, C. H., Amin, H., & Abadullah, A. (2025). *Islamic Finance and Corporate Governance: Synergies for Sustainable Growth*. *Islamic Finance and Corporate Governance: Synergies for Sustainable Growth*. <https://doi.org/10.1108/9781836623465>
- Anwar, C. J. (2023). Heterogeneity Effect of Central Bank Independence on Inflation in Developing Countries. *Global Journal of Emerging Market Economies*. <https://doi.org/10.1177/09749101221082049>
- Arrafi Juliannisa, I., & Artino, A. (2022). Determinants analysis of GDP Per capita's growth and state regulations of 7 ASEAN countries. *International Journal of Research in Business and Social Science* (2147- 4478). <https://doi.org/10.20525/ijrbs.v11i2.1664>
- Balázsi, L., Baltagi, B. H., Mátyás, L., & Pus, D. (2024). Random Effects Models. In *Advanced Studies in Theoretical and Applied Econometrics*. https://doi.org/10.1007/978-3-031-49849-7_3
- Barkoulas, D. R., & Chionis, D. (2024). Macroeconomic Dynamics in the Greek Economy during the Pre- and Post-Euro Adoption Periods. *Journal of Risk and Financial Management*. <https://doi.org/10.3390/jrfm17040156>
- Bigerna, S. (2023). Energy price shocks, exchange rates and inflation nexus. *Energy Economics*, 128, 107156. <https://doi.org/10.1016/j.eneco.2023.107156>
- Bogari, A. (2020). Central Bank Independence, Economic Growth and Inflation: Theories and Empirical Validations. *International Journal of Applied Economics, Finance and Accounting*. <https://doi.org/10.33094/8.2017.2020.61.11.21>
- Carstensen, K., & Salzmann, L. (2017). The G7 business cycle in a globalized world. *Journal of International Money and Finance*. <https://doi.org/10.1016/j.jimonfin.2017.02.002>
- Chidimma Maria-Gorretti Umeaduma. (2022). Interplay between inflation expectations, wage adjustments, and aggregate demand in post-pandemic economic recovery. *World Journal of Advanced Research and Reviews*. <https://doi.org/10.30574/wjarr.2022.13.3.0258>
- Choirunnisa, N. H., & Yusfi, R. H. (2025). Macroeconomic Drivers of GDP per Capita Growth in Five Middle-Income ASEAN Countries. *Journal of Enterprise and Development*. <https://doi.org/10.20414/jed.v7i3.14155>
- Clarke, T. (2024). The Asian financial crisis 1997. In *Elgar Encyclopedia of Corporate Governance*. <https://doi.org/10.4337/9781839107061.ch123>
- Cline, W. (2023). Fighting the Pandemic Inflation Surge of 2021-2022. *SSRN Electronic Journal*. <https://doi.org/10.2139/ssrn.4408811>
- Dacuycuy, L. B. (2021). How influential are COVID–19 data points? A fresh look at an estimated small scale DSGE model for the Philippines. *Philippine Review of Economics*. <https://doi.org/10.37907/2ERP1202JD>
- De Alwis, T., & Dewasiri, N. J. (2021). Demand-Driven Factors of Inflation in Sri Lanka: An ARDL Approach. *Sri Lanka Journal of Management Studies*. <https://doi.org/10.4038/sljms.v3i2.83>

- Dritsaki, C., & Dritsaki, M. (2012). Inflation, Unemployment and the NAIRU in Greece. *Procedia Economics and Finance*. [https://doi.org/10.1016/s2212-5671\(12\)00015-9](https://doi.org/10.1016/s2212-5671(12)00015-9)
- Drivers of Food Price Inflation in Turkey. (2020). *Drivers of Food Price Inflation in Turkey*. <https://doi.org/10.1596/37481>
- Elgin, C., & Öztunall, O. (2024). Central Bank Independence and Inflation under Asymmetric Information: Delegation vs. Seesaw Effects. *Journal of Central Banking Theory and Practice*. <https://doi.org/10.2478/jcbtp-2024-0029>
- Elmassah, S. (2024). Determinants of renewable energy production in emerging and developed countries. *International Journal of Energy Sector Management*. <https://doi.org/10.1108/IJESM-08-2021-0031>
- Furuoka, F., Pui, K. L., Chomar, M. T., & Nikitina, L. (2023). TRADE OPENNESS AND THE PHILLIPS CURVE: EVIDENCE FROM ASEAN COUNTRIES. *Singapore Economic Review*. <https://doi.org/10.1142/S0217590820500599>
- Galvao, A. F., Parker, T., & Xiao, Z. (2024). Bootstrap Inference for Panel Data Quantile Regression. *Journal of Business and Economic Statistics*. <https://doi.org/10.1080/07350015.2023.2210189>
- Garriga, A. C., & Rodriguez, C. M. (2023). Central bank independence and inflation volatility in developing countries. *Economic Analysis and Policy*. <https://doi.org/10.1016/j.eap.2023.05.008>
- Gojčaj, V. (2025). Does Central Bank Independence Affect Inflation? *Journal of Central Banking Theory and Practice*. <https://doi.org/10.2478/jcbtp-2025-0027>
- Ha, J., Kose, M. A., & Ohnsorge, F. (2022). From Low to High Inflation: Implications for Emerging Market and Developing Economies. *SSRN Electronic Journal*. <https://doi.org/10.2139/ssrn.4074459>
- Hermawan, & Amirullah. (2021). Metode Penelitian Bisnis: Pendekatan Kuantitatif dan Kualitatif. *Media Nusa Creative*.
- Hidhiir, M. H. bin, Ahmad, Z., Junoh, M. Z. M., & Yusof, M. F. Bin. (2024). Dynamics of economic growth in ASEAN-5 countries: a panel ARDL approach. *Discover Sustainability*. <https://doi.org/10.1007/s43621-024-00351-x>
- Jaswal, A., & Ahuja, B. R. (2024). Unconventional US Monetary Policy: Impact on the Indian Economy. *Indian Economic Journal*. <https://doi.org/10.1177/0019466221998627>
- Kocoglu, M. (2023). Drivers of inflation in Turkey: a new Keynesian Phillips curve perspective. *Economic Change and Restructuring*. <https://doi.org/10.1007/s10644-023-09532-6>
- Lim, J. J. (2021). The limits of central bank independence for inflation performance. *Public Choice*. <https://doi.org/10.1007/s11127-019-00771-8>
- Malaviarachchi, D., & Korale-Gedara, P. M. (2025). Decomposition of food price inflation in Sri Lanka. *Journal of the Asia Pacific Economy*. <https://doi.org/10.1080/13547860.2024.2378532>
- Marafa, H. (2024). Revamping Legal and Institutional Framework for the Management of Inflation Targeting in Developing Economies. *International Journal of Development and Economic Sustainability*. <https://doi.org/10.37745/ijdes.13/vol12n288102>
- Mergel, I. (2012). OpenCollaboration in Public Sector: The case of social codign on Github. *Government Information Quarterly*.

- Mishra, A., Dash, A. K., & Padhan, P. C. (2024). Does global crude oil price transmit an asymmetric shock on food inflation? Evidence from south and southeast Asian economies. *Journal of Agribusiness in Developing and Emerging Economies*. <https://doi.org/10.1108/JADEE-01-2024-0042>
- Muhammad, A. A. (2023). Examining the Relationship among Unemployment, Inflation, and Economic Growth. *Journal of Business and Economic Options*.
- Nookhwun, N., & Waiyawatjakorn, R. (2024). Flexible Inflation Targeting and Macroeconomic Performance: Evidence from ASEAN. *Asian Economic Policy Review*. <https://doi.org/10.1111/aepr.12459>
- Pegkas, P. (2024). The Asymmetric Effects of Unemployment and Output on Inflation in Greece: A Nonlinear ARDL Approach. *Economies*. <https://doi.org/10.3390/economies12120346>
- Platitas, R. J. C., & Ocampo, J. C. G. (2025). From bottlenecks to inflation: Impact of global supply-chain disruptions on inflation in select Asian economies. *Latin American Journal of Central Banking*. <https://doi.org/10.1016/j.latchb.2024.100141>
- Putranto, P. (2022). Metodologi penelitian kuantitatif. *Jurnal. Bandung: UIN Sunan Gunung Djati.(Tersedia Di Http://Komunikasi. Uinsgd. Ac. Id)*.
- Radjab, Enny Jam'an, A. (2017). Metode Penelitian Bisnis. *Syria Studies*.
- Sahnoun, M., & Abdennadher, C. (2023). Active labor market policies and institutional quality of governance: evidence from OECD countries. *Eurasian Economic Review*. <https://doi.org/10.1007/s40822-023-00247-7>
- Saqib, M. (2025). Analyzing Inflation Dynamics in Pakistan: The New Keynesian Phillips Curve Perspective. *Journal of the Knowledge Economy*. <https://doi.org/10.1007/s13132-024-02380-3>
- Selvanayagam, S., & Mustafa, A. M. M. (2018). The Impact Of Unemployment And Interest Rate On Inflation In Sri Lanka. *GIS Business*. <https://doi.org/10.26643/gis.v13i4.4685>
- Suciany, A. D., Damayanti, C. R., & Darmawan, A. (2024). Exchange Rate , Inflation , Interest Rate and Economic Growth : How They Interact in ASEAN. *Jurnal Administrasi Bisnis*.
- Suidarma, I. M., Arta Yasa, I. N., Nina Eka Lestari, N. P., Ketut Gede Prabawa, I. D., Lasmi, N. W., & Sunarta, I. N. (2023). Exploring The Global Slack Hypothesis On Inflation Dynamics: A Study In ASEAN-5. *International Journal of Social Science and Business*. <https://doi.org/10.23887/ijssb.v7i2.54440>
- Tan, K. (2020). Economic impacts of and policy responses to the coronavirus pandemic : early evidence from Nigeria. *Support Economic Transformation*.
- Tran, T. B. N., & Pham, H. C. H. (2020). The Spillover Effects of the US Unconventional Monetary Policy: New Evidence from Asian Developing Countries. *Journal of Risk and Financial Management*. <https://doi.org/10.3390/jrfm13080165>
- Trinh, P. T. T., & Nhan, L. P. A. (2023). The Global Factors Driving Common Inflation In ASEAN. *Global Business and Finance Review*. <https://doi.org/10.17549/gbfr.2023.28.4.90>
- Yilmazkuday, H. (2022). Drivers of Turkish inflation. *Quarterly Review of Economics and Finance*. <https://doi.org/10.1016/j.qref.2022.03.005>
- Yin, R. K. (2011). *Qualitative Research form Start to Finish*. New York: The Guilford Press.