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# Testing the Phillips Curve in Vietnam and Mongolia: A Pre- and Post-COVID Comparative Analysis

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**Abstract**

The stability of the Phillips curve remains widely debated, particularly in emerging markets and developing economies (EMDEs). This study investigates the inflation-unemployment relationship in Vietnam and Mongolia using data for the period 2014–2025. By examining two underrepresented Asian economies within a common empirical framework, the study extends the existing literature by providing a comparative analysis of the Phillips curve before and after the COVID pandemic.

**Keywords:** Phillips curve; Inflation; Unemployment; COVID; Vietnam; Mongolia

## 1. Introduction

Asia is one of the most economically diverse regions in the world, encompassing both advanced economies and emerging markets and developing economies (EMDEs). Unlike Europe, which consists predominantly of advanced economies, or Africa, where most countries are classified as EMDEs, Asia exhibits substantial variation in levels of economic development within the same geographic region. This diversity makes Asia an attractive setting for examining how economic relationships differ across countries at different stages of development. However, existing empirical research on Asian economies has focused primarily on relatively advanced and high-income countries, such as Singapore, South Korea, and Japan. In contrast, many Asian EMDEs remain underrepresented in the empirical literature despite their growing economic importance, and the limited evidence on these economies leaves an important gap in understanding whether findings established for advanced economies also apply to developing Asian countries.

Conducting research on lower-income Asian economies is often challenging because reliable, consistent, and sufficiently long time-series data are frequently unavailable. These limitations are particularly severe for low-income and lower-middle-income countries, where statistical reporting may be incomplete, irregular, or subject to methodological changes over time. As a result, many lower-income Asian countries cannot be included in empirical analyses despite their potential relevance. This study therefore focuses on Vietnam and Mongolia, two upper-middle-income Asian economies that provide an appropriate balance between data availability and limited prior empirical attention. Both countries have experienced substantial economic transformation and increasing integration into the global economy, making them interesting case studies while remaining relatively underexplored in the literature, particularly Mongolia.

Focusing on these countries expands the evidence base beyond the advanced Asian economies that dominate existing research. Accordingly, this study contributes to the literature by providing new evidence from two underexamined Asian EMDEs using data of sufficient quality and length to support rigorous

empirical analysis. In addition, relatively little is known about how the COVID pandemic affected Phillips curve relationships in developing economies, a gap this study seeks to address. Specifically, this study examines the inflation-unemployment relationship described by the Phillips curve in Vietnam and Mongolia before and after the COVID pandemic using a linear regression with monthly CPI and annual unemployment data. The results reveal a weakening but persistent negative relationship in Vietnam, with the slope coefficient declining from -0.24 pre-COVID to -0.15 post-COVID, while Mongolia's relationship reverses entirely, changing from a weak negative coefficient of -0.09 pre-COVID to a positive coefficient of +0.13 post-COVID. These findings suggest that the traditional Phillips curve relationship is neither stable nor universal across Asian EMDEs, and that its strength and direction depend heavily on country-specific economic environments, including labour market institutions and exposure to supply-side shocks. The findings also carry differing policy implications for the two countries. In Vietnam, unemployment remains a useful, albeit weaker, predictor of inflation. In Mongolia, however, the positive relationship suggests that traditional Phillips curve-based policy frameworks have limited applicability, and that policymakers may need to place greater emphasis on strengthening supply-side resilience to control inflation. The remainder of the paper is organised as follows. Section 2 reviews the literature on the Phillips curve, with particular emphasis on evidence from EMDEs, Asia, and the post-COVID period. Section 3 describes the data and explains the construction of the dataset. Section 4 outlines the empirical methodology and presents the regression results. Section 5 discusses the findings in the context of the existing literature and their policy implications. Finally, Section 6 concludes by summarising the main findings, discussing the study's limitations, and suggesting directions for future research.

## 2. Literature Review

The Phillips curve originated from Philip's (1958) seminal empirical study of the relationship between wage inflation and unemployment in the U.K., using data spanning 1861 to 1957. Phillips documented a stable inverse relationship between the two variables, showing that periods of low unemployment were generally associated with faster wage growth, whereas periods of high unemployment coincided with slower wage growth. This finding was highly influential because it suggested the existence of a short-run trade-off between inflation and unemployment, providing policymakers with a potential framework for macroeconomic stabilization. Keynesian economists subsequently argued that expansionary demand policies could temporarily reduce unemployment at the cost of higher inflation (Sovbetov & Kaplan, 2025). Since its introduction, the Phillips curve has become one of the most extensively studied relationships in macroeconomics. Some authors have challenged the existence of a long-run relationship between inflation and unemployment, arguing that any apparent trade-off is only temporary. Famously, Friedman (1968) argued that while, in the short run, there can be a discrepancy between expected and actual price changes, in the long run, once expectations have adjusted, the trade-off proposed by Phillips disappears.

Early empirical research generally supported the existence of the Phillips curve in advanced economies. Toyoda (1972) found evidence of a stable inflation-unemployment trade-off in Japan using data from 1956 to 1968, while Sumner and Ward (1983) reported a stable and well-defined short-run relationship in the U.K. Although the oil shocks of the 1970s raised doubts about the usefulness of the Phillips curve as a policy guide, subsequent research suggested that the relationship remained empirically relevant. For example, Fuhrer (1995) showed that, despite considerable structural changes in the U.S. economy, the Phillips curve exhibited relatively little instability between 1960 and 1995 and continued to play an important role in macroeconometric models.

Evidence from EMDEs has proven considerably more mixed. Modigliani and Tarantelli (1973) argued that the conventional Phillips curve cannot be straightforwardly applied to EMDEs because of the structural heterogeneity of their labour markets. Similarly, Coibion and Gorodnichenko (2015) emphasized that labour market institutions play an important role in shaping inflation-unemployment dynamics, suggesting that the relationship may differ substantially across countries depending on institutional and structural characteristics.

Within Asia, empirical findings are similarly heterogeneous. Ali et al. (2022), using panel data for eleven Asian economies covering 1991–2020, found evidence of a long-run Phillips curve but no statistically significant short-run relationship. Furuoka et al. (2023), examining ten ASEAN economies between 2008 and 2017, showed that the slope of the Phillips curve depends on trade openness, with more open economies exhibiting a steeper inflation-unemployment trade-off. Kartika and Kurniasih (2020), analysing several ASEAN countries including Vietnam, reported a negative and statistically significant relationship between inflation and unemployment in both the short and long run.

The empirical evidence for Vietnam, however, remains inconclusive. Van Dang and Vu (2016), using data from 2000 to 2014, found support for the Phillips curve in the Vietnamese economy. In contrast, Tung et al. (2022), employing a longer sample covering 1992 to 2021, concluded that the relationship does not hold in either the short or the long run. These conflicting findings suggest that the inflation-unemployment relationship in Vietnam is sensitive to the sample period, prevailing economic conditions, and the empirical methodology employed.

Research examining the Phillips curve in Mongolia is extremely limited. To the best of my knowledge, no study has directly investigated the inflation-unemployment relationship in Mongolia using recent data. Bersch et al. (2012) found a statistically significant positive relationship between the output gap and inflation. Combined with evidence from Okun's law, whereby positive output gaps are generally associated with lower unemployment (Ball et al., 2013), these findings may provide indirect support for a conventional Phillips curve relationship. Nevertheless, direct evidence on the Phillips curve in Mongolia remains scarce, representing an important gap in the literature.

Beyond individual countries, several studies have investigated whether the Phillips curve exists across broader groups of economies. Using a panel of 189 countries over the period 1970–2009, Mazumder (2011) found little evidence supporting the existence of a global Phillips curve. However, the study reported a robust inflation-output trade-off among developed economies, whereas no statistically significant relationship was found for Asian EMDEs. Similarly, Sovbetov and Kaplan (2025) showed that the Phillips curve fails to hold in several countries characterised by historically high and volatile inflation or a greater susceptibility to recessions. These findings suggest that the relationship may depend on country-specific economic conditions.

More recent research has focused on the apparent flattening of the Phillips curve, particularly in advanced economies. Kuttner and Robinson (2010) documented evidence that the inflation-unemployment trade-off has weakened over time, while Haschka (2024) found that the slope of the Phillips curve in the United States has steadily declined since the 1980s. Likewise, Sovbetov and Kaplan (2025) reported that the backward-looking component of the Phillips curve has diminished over time, especially in developed economies such as the U.S. and Canada. In contrast, evidence for EMDEs remains considerably more diverse. Selvaraj (2020) found that while the Phillips curve has flattened in developed countries such as Canada and Belgium, several EMDEs, including Laos and Liberia, exhibited a positive inflation-unemployment relationship. Similar evidence was reported by Mungai (2023), who found a positive relationship

in Kenya over the period 1992–2020. Collectively, these findings suggest that the Phillips curve is considerably less stable in EMDEs and may depend on broader macroeconomic and institutional conditions.
The COVID pandemic provided a unique opportunity to reassess the stability of the Phillips curve under unprecedented economic conditions. Ceratto and Gitti (2022) found that the Phillips curve flattened during the pandemic in the United States before becoming substantially steeper afterwards. Similarly, Teo (2024) reported evidence of a steeper Phillips curve in Malaysia following the pandemic. Using data from 56 economies spanning the first quarter of 2012 to the third quarter of 2024, Canare (2026) found that, on average, the Phillips curve became steeper after COVID, particularly in countries experiencing larger increases in inflation, declining unemployment gaps, and lower trade intensity. Evidence for emerging Asian economies, however, remains limited. Ayu et al. (2025) found that although the inflation-unemployment relationship in Indonesia remained negative during the pandemic, it was not statistically significant. Gupta and Marda (2025), analysing 28 emerging economies, similarly reported that the negative relationship observed before COVID weakened following the pandemic.
Overall, the empirical evidence suggests that the Phillips curve is far from universal. While considerable evidence supports its existence in many advanced economies, findings for EMDEs are substantially more mixed. Evidence for Asia remains relatively limited, particularly for EMDEs, and direct empirical evidence for Mongolia is almost non-existent. Moreover, relatively few studies compare the inflation-unemployment relationship before and after the COVID pandemic using a common empirical framework. This study addresses these gaps by examining the Phillips curve in Vietnam and Mongolia over the period 2014–2025, allowing for a comparison between the pre- and post-pandemic periods and providing new evidence on the behaviour of the Phillips curve in two Asian EMDEs.

## 3. Data Description

The macroeconomic data used in this study were obtained from the International Monetary Fund (IMF), specifically using the Asia and Pacific Regional Economic Outlook (APDREO) database, for Vietnam and Mongolia. This analysis focuses on two variables: (i) the unemployment rate, and (ii) period-over-period percentage change in the Consumer Price Index (CPI), all items, which serve as measures of labour market conditions and inflation, respectively. CPI data are available at the monthly frequency for both countries. In contrast, unemployment data for these EMDEs are reported only on an annual basis through the APDREO database. While monthly or quarterly unemployment statistics are commonly available for many advanced economies, such higher-frequency labour market data are often unavailable for EMDEs. To construct a dataset with a common monthly frequency, each annual unemployment observation is assigned to all twelve months of its corresponding calendar year. This approach preserves the original annual unemployment information while aligning it with the monthly CPI series for the empirical analysis.
For both countries, the sample covers the period from January 2014 to December 2025, yielding a total of 288 observations (144 monthly observations for each country). This period is naturally divided into two equal subperiods: 2014–2019 (pre-COVID) and 2020–2025 (post-COVID). This division facilitates a comparison of the inflation–unemployment relationship across both countries before and after the pandemic, allowing us to assess whether the Phillips curve held during each period and whether any changes in the relationship were consistent across the two EMDEs.

## 4. Methodology

The empirical analysis employs a simple linear regression model to estimate the relationship between infl-

ation and unemployment, consistent with the traditional specification of the Phillips curve. Following the conventional approach in the literature, the unemployment rate is treated as the independent variable and the inflation rate as the dependent variable. The regression model is specified as:

$$y_t = \beta_0 + \beta_1 x_t + e_t, \quad (1)$$

where $y_t$ denotes the inflation rate in period $t$, $x_t$ denotes the unemployment rate in period $t$, $\beta_0$ is the intercept parameter, $\beta_1$ is the slope parameter measuring the relationship between unemployment and inflation, and $e_t$ is the error term, capturing the effects of all other factors influencing inflation that are not explicitly included in the model.

The regression models are estimated separately for Vietnam and Mongolia over both the pre- and post-COVID periods. Accordingly, four separate regressions are estimated to examine the strength and direction of the inflation-unemployment relationship for the two countries and time periods. Since the data are time series, each regression is based on the 72 observations corresponding to the relevant six-year sub-period.

## 5. Empirical Results

**Table 1: Estimated Slope Coefficients**

| | **Pre-COVID** | **Post-COVID** |
|---|---|---|
| **Vietnam** | −0.24 | −0.15 |
| **Mongolia** | −0.09 | +0.13 |

Table 1 reports the estimated slope coefficients for the four regression models. The slope coefficient measures the direction and strength of the relationship between unemployment and inflation, with a negative coefficient indicating an inverse relationship consistent with the traditional Phillips curve.

For Vietnam, the estimated coefficient is (-0.24) during the pre-COVID period, implying that a one-percentage-point increase in the unemployment rate is associated with a 0.24 percentage-point decrease in inflation. In the post-COVID period, the coefficient remains negative but declines in magnitude to (-0.15). Thus, while the inverse relationship persists, its strength weakens considerably, with the estimated effect falling by approximately 37%.

For Mongolia, the pre-COVID coefficient is (-0.09), indicating a relatively weak inverse relationship between unemployment and inflation. The post-COVID estimate changes sign, increasing to (+0.13), implying that higher unemployment is now associated with higher inflation. Notably, while only the pre-COVID estimate for Vietnam was statistically significant, this finding is consistent with existing literature, which generally finds the Phillips relationship to be weak, particularly in EMDEs. Nevertheless, the coefficients provide useful insights into how the relationship evolved after the pandemic. Mongolia's reversal suggests that the traditional Phillips curve relationship no longer holds in Mongolia after the pandemic. Moreover, the absolute magnitude of the coefficient increases from 0.09 to 0.13, indicating that the post-COVID relationship is not only different in direction but also stronger in magnitude than before the pandemic.

Comparing the two countries, Vietnam exhibits a stronger inflation-unemployment relationship than Mongolia during the pre-COVID period, as reflected by the larger absolute value of its slope coefficient. Although both countries display negative coefficients before the pandemic, Vietnam's relationship is substantially stronger. Following COVID, however, the estimated relationships diverge. Vietnam continues to exhibit a negative relationship, albeit a weaker one, whereas Mongolia displays a positive

relationship, indicating a complete reversal in the direction of the association. Despite these differences, both coefficients move towards more positive values after the pandemic, and their absolute magnitudes become relatively similar, suggesting that the strength of the relationship converges across the two countries, even though its direction differs.

## 6. Discussion

The results discussed in the previous section suggest that the Phillips curve relationship is relatively weak in both Vietnam and Mongolia across the pre- and post-COVID periods, with Mongolia exhibiting a reversal of the traditional inverse trade-off between unemployment and inflation following the pandemic. These findings are consistent with a growing body of empirical evidence indicating that the Phillips curve is neither universal nor stable over time. Rather, its strength and, in some cases, even its direction appear to depend on country-specific structural, institutional, and policy characteristics, as well as the broader economic environment. Against this backdrop, comparing the results for Vietnam and Mongolia with evidence from other economies provides useful insight into the factors that may explain the differing behaviour of the Phillips curve across countries and time periods, particularly EMDEs, where structural heterogeneity is often more pronounced than in advanced economies.

One possible explanation for the weak or non-existent relationships observed in Vietnam and Mongolia is the growing importance of inflation expectations. Since the 1980s, many central banks have adopted inflation-targeting frameworks, typically aiming to maintain inflation close to 2%. These frameworks have enhanced the credibility of monetary policy and helped anchor inflation expectations. As households and firms become more confident that inflation will remain close to target, wage and price-setting decisions become less responsive to fluctuations in unemployment, causing the Phillips curve to flatten (Jørgensen & Lansing, 2025). This interpretation is consistent with the findings of Kuttner and Robinson (2010), Haschka (2024) and Sovbetov and Kaplan (2025), who document a gradual weakening of the Phillips curve over time, particularly in advanced economies, partly attributable to better-anchored inflation expectations. The COVID pandemic, however, temporarily disrupted these expectations. Inflation became considerably more volatile as supply chain disruptions, shifts in demand, and sharp increases in commodity prices generated persistent inflationary pressures, making future inflation more difficult to predict. This provides a plausible explanation for why several post-pandemic studies observed changes in the Phillips curve relationship. For example, Gupta and Marda (2025) and Ayu et al. (2025) find that the traditional inverse relationship weakened across several emerging economies following the pandemic, consistent with the evidence for Vietnam.

While anchored inflation expectations may explain the smallest negative coefficient observed in Vietnam, they cannot fully account for the positive coefficient found for Mongolia. This suggests that structural characteristics also shape the unemployment-inflation relationship. In particular, labour market institutions and production structures appear to play an important role (Coibion & Gorodnichenko, 2015). Modigliani and Tarantelli (1973) argue that the conventional Phillips curve cannot be directly applied to developing economies because standard unemployment measures fail to distinguish between trained and untrained unemployed workers. As untrained workers are typically less informed and less readily employable, a given unemployment rate exerts less downward pressure on wages than in advanced economies. Similarly, Mazumder (2011) and Sovbetov and Kaplan (2025) find that the Phillips curve is considerably less stable in EMDEs, attributing this to differences in labour market structures and production patterns. These production patterns may help explain the contrasting results for Vietnam and Mongolia. Vietnam's

manufacturing-oriented economy is relatively labour intensive, allowing changes in labour demand to translate more readily into wages and inflation. Mongolia, by contrast, relies more heavily on primary industries, namely agricultural and mining, where commodity price fluctuations and supply shocks play a larger role, weakening the link between unemployment and inflation.

Turning specifically to Vietnam, the results suggest that the traditional Phillips curve relationship persisted after the COVID pandemic, although it weakened considerably. The estimated coefficient declined from -0.24 before the pandemic to -0.15 afterward, consistent with evidence of a gradual flattening of the Phillips curve. One plausible explanation is Vietnam's high degree of trade openness. Furuoka et al. (2023) show that trade openness significantly influences the slope of the Phillips curve within ASEAN economies, observing countries with greater trade-openness have steeper curves, as there's more competition, thus quicker inflation responses. During the pandemic, disruptions to global supply chains, together with rising transport and energy prices, generated inflationary pressures largely independent of domestic labour market conditions. As a result, inflation became increasingly driven by external supply-side shocks rather than changes in unemployment, weakening the relationship predicted by the traditional Phillips curve. Similar evidence is reported for Indonesia, where the unemployment-inflation relationship remained negative between 2019 and 2024 but lost statistical significance. Ayu et al. (2025) attribute this primarily to supply-side disturbances, including global supply chain disruption, energy price shocks, and heightened geopolitical tension, rather than to a breakdown of the underlying labour market mechanism. Together, these findings suggest that the traditional Phillips curve provides a less complete explanation of inflation dynamics in EMDEs during periods dominated by external supply shocks.

Mongolia presents a very different pattern. While the pre-COVID coefficient of -0.09 indicates a weak inverse relationship consistent with the traditional Phillips curve, the post-COVID coefficient of +0.13 suggests that higher unemployment became associated with higher inflation. Although uncommon, such positive relationships have been documented previously. Selvaraj (2020), for example, reports similar findings for several developing economies such as Laos and Liberia, attributing them to trade liberalisation, nominal wage rigidities, anchored inflation expectations, weak worker bargaining power, and stagflationary conditions. These mechanisms provide a plausible explanation for Mongolia's results. As a small, open economy heavily dependent on mineral exports, Mongolia is particularly vulnerable to commodity price fluctuations and external supply shocks (Bersch et al., 2012). During the pandemic, disruptions to global supply chains and rising energy prices generated inflationary pressures largely independent of domestic labour market conditions, while nominal wage rigidities may have reduced the influence of rising unemployment on inflation. Consequently, inflation appears to have been driven primarily by external supply-side factors rather than labour market conditions, consistent with broader evidence that the Phillips curve is more likely to weaken or even reverse in economies characterised by greater macroeconomic volatility and less developed labour market institutions (Sovbetov & Kaplan, 2025).

The contrasting experiences of Vietnam and Mongolia highlight the importance of country-specific structural characteristics in shaping the behaviour of the Phillips curve. Although both economies are classified as Asian EMDEs and were exposed to the same global shock, they exhibited markedly different inflation-unemployment dynamics following the COVID pandemic. Vietnam's relatively stable macroeconomic environment and manufacturing-based economy allowed the traditional inverse relationship to persist, albeit in a weaker form, whereas Mongolia's greater dependence on commodity exports and exposure to external supply shocks resulted in a reversal of the relationship. These findings are consistent with Coibion

and Gorodnichenko (2015) and Modigliani and Tarantelli (1973), who argue that labour market institutions, economic structure, and the stage of development play a central role in determining inflation-unemployment dynamics. More broadly, the evidence suggests that the Phillips curve should not be viewed as a universal or stable relationship, but rather as one whose strength and even direction depend on the underlying economic environment. Consequently, applying a single Phillips curve framework across developing economies is unlikely to provide a reliable description of inflation behaviour.

These findings also carry important policy implications. For Vietnam, the persistence of a negative Phillips curve relationship suggests that unemployment remains a useful indicator of inflationary pressures. However, the substantial decline in the estimated coefficient indicates that changes in labour market conditions now exert a smaller influence on inflation than before the pandemic, implying that policymakers should place greater weight on inflation expectations and external supply-side developments when assessing inflation risks. For Mongolia, the policy implications are considerably stronger. The positive post-pandemic relationship suggests that inflation is no longer primarily driven by domestic labour market conditions, limiting the usefulness of traditional Phillips curve-based policy frameworks. Instead, inflation appears to be dominated by external supply shocks, commodity price fluctuations, and structural constraints. In such an environment, policies aimed solely at influencing aggregate demand are likely to have limited effectiveness unless accompanied by measures that strengthen supply-chain resilience, reduce vulnerability to imported inflation, and improve the economy's capacity to absorb external shocks. More generally, the results suggest that macroeconomic policy in developing economies should be tailored to country-specific structural conditions rather than relying on a common inflation-unemployment relationship.

## 7. Conclusion

This paper examined the stability of the Phillips curve in two underrepresented Asian EMDEs, Vietnam and Mongolia, over the period 2014–2025. By comparing the pre-COVID (2014–2019) and post-COVID (2020–2025) periods, the study investigated whether the traditional inverse relationship between inflation and unemployment remained stable following the pandemic. Using four linear regression models estimated separately for each country and period, the findings reveal markedly different post-pandemic experiences. Vietnam continued to exhibit a negative relationship between unemployment and inflation, although the estimated slope weakened substantially, consistent with evidence of a flattening Phillips curve. In contrast, Mongolia experienced a complete reversal, with the relationship changing from weakly negative before the pandemic to positive afterwards. Together, these findings reinforce growing evidence that the Phillips curve is neither universal nor stable over time, but instead depends on country-specific structural characteristics, labour market institutions, and exposure to external supply-side shocks. More broadly, the results suggest that the traditional Phillips curve provides a less reliable framework for understanding inflation dynamics in developing economies than in advanced economies.

Several limitations should be acknowledged. First, the analysis relies on a simple linear regression model in which unemployment is treated as the sole determinant of inflation. In reality, inflation is also influenced by commodity prices, exchange rates, inflation expectations, and monetary policy. Thus, omitted variable bias may affect the estimated coefficients. Second, although monthly CPI data were available, unemployment data were reported only annually, requiring each observation to be repeated across the corresponding twelve months. Furthermore, the post-COVID period combines the pandemic years with the subsequent recovery, limiting the ability to distinguish between short-term disruptions and longer-term structural changes. These constraints reflect the broader challenge of conducting empirical research on

EMDEs, where macroeconomic data are often less extensive and available at lower frequencies than in advanced economies. Finally, the limited body of previous research on Vietnam, and particularly Mongolia, restricts opportunities for comparison and makes it more difficult to identify the mechanisms underlying the observed relationships (Agénor & Bayraktar, 2010). For instance, Fidrmuc and Danišková (2020) show evidence of publication bias towards statistically significant findings in leading journals suggesting that less conventional results, such as Mongolia's positive post-pandemic relationship, may be underrepresented in the published literature.

Despite these limitations, the study makes several contributions to the literature. It provides new evidence on the Phillips curve in two relatively underexplored Asian EMDEs, confirms a post-pandemic flattening of the relationship in Vietnam, and offers one of the first direct empirical examinations of the inflation-unemployment relationship in Mongolia. The reversal observed in Mongolia contributes novel evidence to a literature where direct empirical research remains scarce. More broadly, the findings demonstrate that post-COVID Phillips curve behaviour is heterogeneous rather than universal. By expanding the geographical coverage of the literature beyond the advanced economies that dominate existing research, this study provides a foundation for future research on a wider range of EMDEs using longer post-pandemic time series and more comprehensive empirical models.

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