JOURNAL OF POLITICAL STABILITY ARCHIVE

Online ISSN: 3006-5879 Print ISSN: 3006-5860
DOI: https://doi.org/10.63468/jpsa.3.3.42
Vol. 3 No. 3 (2025)
https://journalpsa.com.pk/index.php/JPSA/about

Recognized by: Higher Education Commission (HEC), Government of Pakistan

Navigating the Multi-faceted Specter of Stag inflation in Divergent SCO Countries Economics

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ABSTRACT

This study investigates the complex and disruptive phenomenon of stagflation within the diverse economic landscapes of Shanghai Cooperation Organization (SCO) countries. Understanding its causes and impacts in these geopolitical significant nations, which range from resource-rich to populous, is vital for developing tailored policy solutions. Existing literature often lacks unambiguous conclusions regarding the unique manifestations of stagflation in such divergent economies. The research aims to identify the causes of stagflation, analyze its impact on economic growth and employment, and explore effective policy responses within SCO countries. Utilizing Ordinary Least Squares (OLS) and Random Effects models, framed by a New Keynesian Open Economy Dynamic Stochastic General Equilibrium (DSGE) theoretical framework, the study empirically assesses these relationships. Key findings indicate a significant negative relationship between GDP and unemployment (Okun's Law), while wages surprisingly show a negative correlation with inflation but a positive one with

unemployment. The analysis underscores the need for country-specific policy tailoring and regional cooperation to foster economic resilience amid global uncertainties.
Keywords : Stagflation, inflation, unemployment, SCO countries, economic growth, policy recommendations, Random Effects model, Okun's Law, wage-price spiral, supply-side economics.

INTRODUCTION

The global economy has faced numerous challenges over the decades, but few phenomena are as complex and disruptive as stagflation a condition characterized by the simultaneous occurrence of stagnant economic growth, high unemployment, and persistent inflation. This economic anomaly, which defies traditional economic theories like the Phillips Curve that assume an inverse relationship between inflation and unemployment, poses significant challenges for policymakers and societies alike. Within the context of the Shanghai Cooperation Organization (SCO), a diverse group of countries spanning Asia and parts of Europe, the issue of stagflation takes on an even more intricate dimension. The SCO, comprising nations such as China, Russia, India, Pakistan, and several Central Asian states, represents a unique geopolitical and economic bloc with varying levels of development, resource endowments, institutional frameworks, and economic policies. These differences create a multifaceted spectrum of stagflation experiences, where the causes, impacts, and responses differ significantly across member states. This introduction explores the concept of stagflation, its historical and theoretical underpinnings, and the unique challenges it presents in the divergent economic landscapes of SCO countries, drawing on previous studies to frame the discussion. Stagflation, a term coined in the 1960s by British politician Iain Macleod, emerged as a prominent concern during the 1970s when global economies, particularly in the West, grappled with the aftermath of the OPEC oil crises (Bullar, 2002).

The sharp rise in oil prices acted as a supply shock, driving up production costs while simultaneously slowing economic growth and increasing unemployment. This period challenged the prevailing Keynesian economic models, which struggled to address the simultaneous rise in inflation and unemployment. Studies such as those by Bruno and Sachs (1985) highlight how supply shocks, like the oil price hikes, combined with policy-induced demand contractions, were central to the stagflation of the 1970s (Kolodko, 1987). Their work emphasizes the role of institutional differences, particularly in labor markets, in shaping how economies respond to such shocks. For SCO countries, which include both energy exporters like Russia and energy importers like India and Pakistan, these historical insights remain relevant, as supply-side disruptions continue to influence economic outcomes. The SCO countries present a diverse economic landscape, ranging from resource-rich economies like Russia and Kazakhstan to rapidly growing, populous nations like India and China. This diversity complicates the application of a one-size-fits-all approach to understanding or addressing stagflation. Previous studies, such as those

examining the 1970s stagflation, suggest that supply shocks whether from energy prices, geopolitical conflicts, or trade disruptions are a primary driver of stagflation (Bezpalov et.al, 2022). For instance, the 1973 oil crisis, which quadrupled oil prices, had a profound impact on global economies, as documented in various economic analyses.

In the SCO context, Russia's role as a major energy exporter means it may experience stagflation differently compared to energy-dependent nations like India or Pakistan, where rising energy costs can exacerbate inflation while constraining growth. Moreover, studies like those in the "Economics of Worldwide Stagflation" (Bruno & Sachs, 1985) argue that policy responses, such as monetary tightening or fiscal stimulus, often worsen one aspect of stagflation (e.g., inflation or unemployment) while attempting to address another, creating a policy dilemma that SCO countries must navigate carefully. Beyond supply shocks, misguided government policies have also been identified as a key contributor to stagflation. Research from the 1970s, particularly on the United Kingdom's experience, shows that excessive money supply growth coupled with policies that hindered industrial output fueled stagflation. In the SCO, countries like Pakistan, which have faced chronic fiscal deficits and currency depreciation, may experience stagflation driven by such policy missteps. For example, rapid monetary expansion to finance deficits can lead to inflation, while structural inefficiencies in industries limit growth and job creation (Iqbal et.al, 2015).

Conversely, China's tightly controlled economic policies and state-driven industrial strategies may mitigate some stagflation risks, but its reliance on exports makes it vulnerable to global trade disruptions, as noted in recent analyses of global trade tensions "Navigating Stagflation, Trade Tensions, and Divergent Growth Paths (2025)". These differences underscore the need for tailored policy responses within the SCO framework. The institutional diversity among SCO countries further complicates the stagflation challenge. Previous research, such as the work of Bruno and Sachs (1985), highlights how labor market structures influence economic responses to stagflation. In Europe during the 1970s, rigid labor markets exacerbated unemployment during stagflation, while the more flexible U.S. labor market allowed for quicker adjustments. Within the SCO, countries like India, with its large informal labor market, face different challenges compared to Russia, where state-dominated industries play a significant role. Central Asian SCO members, such as Kazakhstan and Uzbekistan, often grapple with resource-dependent economies and underdeveloped financial systems, which can amplify the impact of stagflation. Studies on economic divergence, such as those examining Sub-Saharan Africa (Divergent Growth Paths, 2025), suggest that institutional factors, including governance quality and state capacity, significantly influence economic outcomes. For SCO countries, these insights highlight the importance of understanding local institutional contexts when addressing stagflation.

Geopolitical factors also play a critical role in shaping stagflation risks within the SCO. The organization's member states operate in a region marked by complex

trade relationships, geopolitical tensions, and varying degrees of integration into the global economy. For instance, U.S.-China trade tensions, as noted in recent macroeconomic updates (*Macro Update*, 2025), have introduced new inflationary pressures through tariffs, which could trigger stag inflationary conditions in export-dependent SCO economies like China.

Similarly, sanctions on Russia have disrupted global energy markets, affecting both Russia's economy and its SCO partners. Previous studies on stagflation, particularly those analyzing the 1970s oil crises, emphasize how external shocks can ripple through interconnected economies, a dynamic highly relevant to the SCO's diverse membership. The interplay of these geopolitical and economic factors creates a multifaceted spectrum of stagflation experiences across SCO countries. The policy dilemma posed by stagflation—where measures to curb inflation often worsen unemployment and vice versa—has been a recurring theme in economic literature. Research from the 1970s and 1980s, such as the work of Bruno and Sachs, recommends a mix of demand management and incomes policies to combat stagflation. However, applying these lessons to SCO countries requires careful consideration of their unique economic structures. For instance, China's ability to implement large-scale fiscal stimulus contrasts with Pakistan's limited fiscal space, which constrains its policy options. Similarly, Russia's energy-driven economy may require different strategies compared to India's service-oriented growth model. Recent studies, such as those exploring monetary and fiscal policy interactions in monetary unions (*What to Do When Stagflation Returns?*, 2016), suggest that cooperative and strategic policy approaches can mitigate stagflation's impacts, a lesson that could inform SCO countries' regional coordination efforts. In conclusion, navigating the multifaceted spectrum of stagflation in SCO countries demands a nuanced understanding of both global economic dynamics and local contexts. Previous studies, particularly those analyzing the 1970s stagflation and its causes, provide valuable insights into the role of supply shocks, policy missteps, and institutional factors. The SCO diverse membership, encompassing economies with varying levels of development, resource endowments, and geopolitical challenges, creates a complex landscape for addressing stagflation. By drawing on historical and theoretical research, this study aims to explore how SCO countries can tailor their policy responses to mitigate the impacts of stagflation, balancing the trade-offs between inflation, unemployment, and growth. Understanding these dynamics is crucial for fostering economic resilience and cooperation within the SCO, particularly in an era marked by global uncertainties and divergent growth paths.

Objectives of the Study

1. To Identify the Causes of Stagflation in SCO Countries.
2. To Analyze the Impact of Stagflation on Economic Growth and Employment.
3. To Explore Policy Responses to Mitigate Stagflation in SCO Countries.

Significance of the Study

This study on stagflation in SCO countries is significant because it addresses a critical economic challenge in a diverse and geopolitics important region. Stagflation,

marked by high inflation and unemployment with low growth, disrupts economies and livelihoods. Understanding its causes and impacts in SCO nations, which range from energy-rich Russia to populous India, is vital for tailored policy solutions. Past studies, like Bruno and Sachs (1985), show that supply shocks and policy errors drive stagflation, offering lessons for SCO countries facing similar issues today. The study's findings can guide policymakers in designing strategies to balance inflation control and job creation, fostering economic stability. Additionally, it promotes regional cooperation within the SCO to address shared challenges, such as trade disruptions or energy price shocks, as highlighted in recent analyses (Bullard, 2002). By bridging historical insights with current economic realities, this study contributes to knowledge on managing stagflation in diverse economies, supporting sustainable growth and resilience in the SCO region.

LITERATURE REVIEW

The phenomenon of stagflation, characterized by simultaneous high inflation, high unemployment, and stagnant economic growth, has been a subject of extensive economic research since its prominence in the 1970s. GRZEGORZ (1987), compares inflation and unemployment in western market economies with the repressed inflation and persistent shortages common in centrally planned economies. Stagflation and stagflation, the latter defined as inflation accompanied by shortages, have much in common, and a similar, albeit inverse, theoretical structure is offered. Measures of stagflation for the western economies and development of a conceptual framework for measuring shortage inflation for the eastern European socialist countries leads to a new 'misery index' facilitating comparisons that are not as misleading as comparison only of inflation rates. They suggest that Italy and Poland have the most severe unhappiness index, and West Germany and East Germany have the lowest unhappiness index.

Furthermore, where relative prices fail to reflect relative scarcities, then the failure of production to fully respond, and the time and other resources wasted through queuing, gluts, and other allocate inefficiencies can slow growth. Jing (2009), research the relationship between inflation and economic growth of China from 1978 to 2007. No unambiguous conclusions on this problems have been obtained from previous literature. This thesis will employ co-integration and error correction models accompanying with correlation matrix and the Granger Causality Test to examine the inflation-economic growth relationship. The data is annual time series from 1978 to 2007 of China. The results show that in the long run inflation positively relate to economic growth in bi-direction. China would pay attention to price level when develops economy. Besides, high speed increase of investment would cause inflation in the short run. These studies employ various econometric models to provide empirical evidence, offering insights into how stagflation manifests in divergent economies and informing potential strategies for SCO nations like China, Russia, India, and Pakistan. Bruno & Sachs (1985), Included in their seminal work, "Economics of Worldwide Stagflation", Bruno and Sachs used a

structural econometric model to analyze the 1970s stagflation triggered by oil price shocks. Their model, incorporating supply-side factors and wage-price spirals, demonstrated that supply shocks increased production costs, leading to inflation and reduced output. For SCO countries, particularly energy importers like India and Pakistan, this study highlights the vulnerability to global commodity price fluctuations.

Blinder (1979), employed a vector auto-regression (VAR) model to examine the U.S. experience during the 1970s. The model showed that oil price shocks and loose monetary policies exacerbated inflation and unemployment. This is relevant for SCO nations like Pakistan, where fiscal deficits and monetary expansion have historically driven inflationary pressures. Barsky & Kilian (2004), investigated "Oil and the Macro-economy Since the 1970s", the authors used a dynamic stochastic general equilibrium (DSGE) model to argue that oil price shocks alone were insufficient to cause stagflation without accompanying monetary policy errors. For Russia, an energy exporter in the SCO, this study underscores the interplay between global energy markets and domestic policy choices. Rasche & Tatom (1977), Explored "The Effects of the New Energy Regime on Economic Capacity, Production, and Prices" applied a production function model to show how energy price hikes reduced economic capacity, leading to stagflation. This is pertinent for SCO energy-dependent economies like India, where energy costs impact industrial output. Kilian (2008), Used a structural VAR model, Kilian's "Exogenous Oil Supply Shocks" demonstrated that supply shocks have differential impacts based on economic structure.

For SCO countries, this suggests that Russia and Kazakhstan may benefit from oil price surges, while India and Pakistan face inflationary pressures. Tobin (1980), study about stabilization policy ten years after used a Keynesian econometric framework to analyze stagflation's impact on unemployment and income inequality. His findings suggest that stagflation disproportionately affects lower-income groups, a concern for populous SCO nations like India and Pakistan with large informal labor markets. Feldstein (1978), included "The Welfare Cost of Permanent Inflation", Feldstein employed a general equilibrium model to quantify stagflation's economic costs, including reduced investment and growth. For SCO countries like China, where investment drives growth, this study highlights the risks of unchecked inflation. Sachs (1980), investigated "Wages, Profits, and Macroeconomic Adjustment" used a panel regression model to show how rigid labor markets exacerbate unemployment during stagflation. This is relevant for SCO countries like Russia, where state-dominated industries may limit labor market flexibility. Baily (1982), Explored "Economic Policy and the Productivity Slowdown", Baily's econometric analysis linked stagflation to productivity declines, using a growth accounting model.

For SCO nations with diverse productivity levels, such as India's service sector versus Uzbekistan's resource-based economy, this underscores the need for structural reforms. Ahmed et al. (2014), their study "Globalization and Inflation

Dynamics" used a panel VAR model to show how global trade integration amplifies inflationary pressures during supply shocks. For SCO countries like China, heavily integrated into global trade, this suggests stagflation risks from trade disruptions. Friedman (1977), Investigated about "Inflation and Unemployment", Friedman advocated tight monetary policy to curb inflation, using a monetarist model. His findings suggest that SCO countries like Pakistan, with high inflation, may benefit from disciplined monetary frameworks, though this risks worsening unemployment. Okun (1978), Explored "Efficient Disinflation Policies" proposed incomes policies to manage wage-price spirals, using a simulation model.

For SCO nations with rigid labor markets, such as Russia, this highlights alternative policy tools to address stagflation without relying solely on monetary tightening. Blanchard & Galí (2007), their study "The Macroeconomic Effects of Oil Price Shocks" used a New Keynesian DSGE model to recommend flexible inflation targeting. This approach could benefit SCO countries like India, balancing inflation control with growth objectives. Bruno (1980), In "Macroeconomic Adjustment with Import Price Shocks", emphasized supply-side reforms to mitigate stagflation. For SCO energy importers like Pakistan, this suggests investing in alternative energy to reduce reliance on imported oil. For SCO countries, regional cooperation could mitigate such external shocks. Relevance to SCO Countries The SCO's diverse membership ranging from resource-rich economies like Russia and Kazakhstan to populous, service-driven economies like India creates a unique context for stagflation. Econometric models from these studies, such as VAR, DSGE, and panel regressions, provide robust evidence that supply shocks, policy errors, and institutional factors drive stagflation. For instance, Russia's energy exports contrast with India's import dependence, leading to divergent stagflation experiences, as noted by Kilian (2008).

Methodology & Theoretical Framework

Stag-Inflation's

$$\pi_{i,t}=\beta_0+\beta_1\Delta W_{i,t}+\beta_2\Delta P_t^{Comm}+\beta_3 ER_{i,t}+\beta_4 Gap_{i,t}+\beta_5\pi_{i,t}^{Exp}+\beta_6 SupChain_t+\epsilon_{i,t}^{\pi}$$

$\pi_{i,t}$: The inflation rate for country i at time t. This is what the model is trying to predict or explain. measured as the year-over-year percentage change in the Consumer Price Index (CPI), or sometimes the Producer Price Index (PPI) for specific analyses. $\beta_1\Delta W_{i,t}$: (Wage Growth Impact): $\Delta W_{i,t}$ represents the growth rate of wages in country i at time t. β_1: the coefficient for wage growth. We would typically expect β_1 to be positive ($\beta_1>0$). Higher wage growth increases production costs for businesses, which they often pass on to consumers in the form of higher prices, leading to inflation (a cost-push inflation mechanism). $\beta_2\Delta P_t^{Comm}$: (Global Commodity Price Change Impact): ΔP_t^{Comm} represents the change in global commodity prices (e.g., oil, food, metals) at time t. This is often a global factor, hence no 'i' subscript. β_2: The coefficient for global commodity price changes. We would expect β_2 to be positive ($\beta_2>0$). When global commodity prices rise, it increases the cost of raw materials and energy for countries that import them, leading to higher domestic prices (another form of cost-push inflation, often referred to as imported

inflation). $\beta_3 ER_{i,t}$: (Exchange Rate Impact) represents the exchange rate of country i's currency at time t. This typically refers to the value of the local currency against a major international currency like the US dollar (e.g., local currency units per USD). $\beta_4 Gap_{i,t}$: (Output Gap Impact): $Gap_{i,t}$ represents the output gap for country i at time t. This is the difference between actual GDP and potential GDP. A positive output gap means the economy is producing above its sustainable capacity, indicating excess aggregate demand. $\beta_5 \pi_{i,t}^{Exp}$: (Inflation Expectations Impact) $\pi_{i,t}^{Exp}$ Represents inflation expectations in country i at time t. This reflects what economic agents (consumers, businesses) anticipate the future inflation rate will be. $\beta_6 SupChain_t$: (Supply Chain Disruption Impact), represents a measure or index of global/regional supply chain disruptions at time t. This could include shipping delays, port congestion, or specific component shortages.

Unemployment

$$U_{i,t} = \delta_0 - \delta_1 \Delta Y_{i,t} + \delta_2 \pi_{i,t} + \delta_3 Structural_{i,t} + \delta_4 LaborMarket_{i,t} + \delta_5 Demographics_{i,t} + \epsilon_{i,t}^{U}$$

$U_{i,t}$: (Dependent Variable): The Unemployment Rate for country i at time t. This is the percentage of people who are looking for work but can't find it. This is what the model is trying to explain or predict. Measurement , the number of unemployed people divided by the total labor force (those employed plus those unemployed but looking for work), expressed as a percentage.

δ_0 : This is the base level of unemployment when all other independent variables are zero. It captures any inherent or minimum level of unemployment not explained by the other specific factors in the model.

$-\delta_1 \Delta Y_{i,t}$: (Economic Growth Impact - Okun's Law), Represents the Real GDP Growth Rate (how fast the economy is growing) in country i at time t. $-\delta_1$ the coefficient for economic growth, with a negative sign. We would strongly expect δ_1 to be positive, meaning the term $-\delta_1 \Delta Y_{i,t}$ makes a negative contribution to unemployment. This reflects Okun's Law, when the economy grows faster (ΔY increases), more jobs are created, and the unemployment rate tends to fall. Conversely, if the economy slows down or shrinks, unemployment tends to rise.

$\delta_2 \pi_{i,t}$: (Inflation Impact - Phillips Curve Link), $\pi_{i,t}$ Represents the Inflation Rate in country i at time t. In the short run (traditional Phillips Curve): Some economic theories suggest a trade-off where lower unemployment might lead to higher inflation, or efforts to reduce inflation might increase unemployment. So, a positive δ_2 here could imply that higher inflation might be *associated with* certain labor market dynamics, or that policy choices aimed at curbing inflation could inadvertently contribute to unemployment in some contexts. In the context of stagflation: If inflation is driven by supply shocks (which simultaneously hurt growth), then higher π could indeed coincide with higher U. Thus, δ_2 would likely be positive ($\delta_2 > 0$), indicating that higher inflation (especially cost-push inflation) can coexist with, or even contribute to, higher unemployment by hurting business activity and hiring.

$\delta_3 Structural_{i,t}$: (Structural Unemployment Impact), represents factors contributing to structural unemployment. This refers to unemployment that arises

from a mismatch between the skills workers have and the skills employers need, or geographical mismatches, or long-term technological changes that make certain jobs obsolete.

$\delta_4 \mathbf{LaborMarket}_{i,t}$: (Labor Market Policy Impact), represents the impact of government policies related to the labor market. This could include things like minimum wage laws, unemployment benefits, union power, ease of hiring/firing regulations, job training programs, or active labor market policies. $\delta_5 \mathbf{Demographics}_{i,t}$: (Demographic Impact), represents demographic factors in country i at time t. This could include the size and age structure of the working-age population, labor force participation rates (e.g., entry of more women into the workforce, aging population leading to retirements), or migration patterns.

$\epsilon_{i,t}^{U}$: This is the random error term. It accounts for any other factors that influence the unemployment rate but are not explicitly included in the model, or for random, unpredictable fluctuations.

Theoretical Framework

A New Keynesian Open Economy Dynamic Stochastic General Equilibrium (DSGE) Model offers a robust theoretical framework by micro founding macroeconomic relationships from rational agents. Its core features, like nominal digitizes (sticky prices/wages), are crucial for generating stagflation, allowing supply shocks (e.g., commodity, climate, supply chain, unique to Asia's "multi-faceted" challenges) to simultaneously raise inflation and curb growth/employment. Open economy elements capture imported inflation via exchange rates and global trade. Crucially, the model's parameters can be calibrated/estimated to reflect the divergent structural characteristics and unique shock exposures of various Asian economies, enabling tailored policy analysis (Feng et.al, 2025) "Stagflation" is a central focus, meaning the model explicitly incorporates mechanisms for both inflation (cost-push and demand-pull) and output/unemployment dynamics in response to various shocks. Representative Household (HH), the household i maximizes its lifetime expected utility, which depends on consumption ($C_{i,t}$), leisure (inverse of labor supply $L_{i,t}$), and potentially real money balances, subject to a sequence of budget constraints

$$E_0 \sum_{t=0}^{\infty} \beta^t U(C_{i,t}, L_{i,t}) \quad \text{(I)}$$

where β is the discount factor, and U(.) is the period utility function. A common form is logarithmic for consumption and a power function for labor. To incorporate real inflexibility often seen in NK models

$$U(C_{i,t}, L_{i,t}) = \frac{(C_{i,t} - \psi C_{i,t-1})^{1-\sigma_c}}{1-\sigma_c} - \frac{L_{i,t}^{1+\sigma_l}}{1+\sigma_l} \quad \text{(II)}$$

Households earn labor income ($W_{i,t}$, $L_{i,t}$), receive profits from firms (Πi,t), pay taxes ($T_{i,t}$), and invest in domestic and foreign bonds ($B_{i,t}$, $B_{i,t*}$)

$$P_{i,t}C_{i,t} + B_{i,t} + S_{i,t}B^*_{i,t} = W_{i,t}L_{i,t} + R_{t-1}B_{i,t-1} + S_{i,t}R^*_{t-1}B^*_{i,t-1} + \Pi_{i,t} - T_{i,t} \quad \text{(III)}$$

where $P_{i,t}$ is the domestic price level, $S_{i,t}$ is the nominal exchange rate, $R_{t-1}$and R_{t-1*} are the nominal interest rates on domestic and foreign bonds, respectively. Consumption Euler Equation (Intertemporal Consumption Choice), this relates

current consumption to expected future consumption, influenced by the real interest rate. It forms the basis of the Dynamic IS Curve (Aggregate Demand side).

$$\frac{U_C(C_{i,t},L_{i,t})}{P_{i,t}}=\beta E_t\left[\frac{U_C(C_{i,t+1},L_{i,t+1})}{P_{i,t+1}}(1+R_t)\right] \quad \text{(IV)}$$

This equation, after linearization and substitution for the real interest rate, shows how current output/consumption (which constitutes a large part of $\Delta Y_{i,t}$) depends on expected future output/consumption and the real interest rate ($R_t-\pi_{i,t+1}^{E}$). Demand shocks would shift this curve. Relates the marginal utility of labor to the real wage. This is a crucial input for the labor market block and the unemployment equation. It shows how households respond to real wage changes and consumption levels. Wage stickiness (a firm or labor union side decision in NK models) would prevent this from clearing perfectly.

$$\frac{U_L(C_{i,t},L_{i,t})}{U_C(C_{i,t},L_{i,t})}=-\frac{W_{i,t}}{P_{i,t}} \quad \text{(V)}$$

There is a continuum of monopolistic competitive firms, each producing a differentiated good using a Cobb-Douglas production function with capital ($K_{i,t}$) and labor ($L_{i,t}$), subject to an aggregate technology shock ($A_{i,t}$).

$$Y_{i,t}(j)=A_{i,t}K_{i,t}(j)^{\alpha}L_{i,t}(j)^{1-\alpha} \quad \text{(VI)}$$

Cost Minimization firms choose $K_{i,t}$ (j) and $L_{i,t}$ (j) to minimize costs for a given output level. This yields the real marginal cost ($MC_{i,t}$) for the aggregate economy. Price Setting (Calvo Pricing): Firms face a probability (1–θ) of being able to re-optimize their price in any given period. If a firm can re-optimize, it sets its price to maximize the present discounted value of future profits. This staggered price setting is key to nominal rigidity. FOC derived from FF optimization (Price Setting), the aggregate price level $P_{i,t}$ evolves based on firms that re-optimize and those that keep prices fixed. The resulting New Keynesian Phillips Curve (NKPC) is

$$\pi_{i,t}=\beta E_t[\pi_{i,t+1}]+\kappa MC_{i,t}+\mu_{i,t}^{\text{Supply}} \quad \text{(VII)}$$

βEt $[\pi_{i,t+1}]$ maps to $\beta_5\pi_{i,t}$ Exp(as rational expectations imply $E_t[\pi_{i,t+1}]=\pi_{i,t}$Exp). MCi,t is influenced by real wages ($W_{i,t}/P_{i,t}$), and its dynamics reflect $\Delta W_{i,t,}$ $\mu_{i,t}$ Supply is the critical term to integrate your supply shocks: β2 ΔP_t^{Comm}: Global commodity price shocks directly affect intermediate input costs, thus influencing $MC_{i,t}$ or entering as a direct cost-push.β3 ERi,t: Exchange rate depreciation increases the local currency cost of imported inputs/commodities, boosting $MC_{i,t}$ or $\mu_{i,t}$Supply. β_6 CC_Impacti: Climate shocks can reduce productivity ($A_{i,t}$ directly or indirectly) or raise input costs (e.g., food scarcity), thus increasing $MC_{i,t}$ or entering as a specific supply shock μi,t Supply. β_7 Sup Chain_Disruptt: Modeled as an increase in the cost of intermediate inputs or a reduction in effective productivity.

$$R_{i,t}=\rho_R R_{i,t-1}+(1-\rho_R)[\bar{R}+\phi_\pi(\pi_{i,t}-\pi^*)+\phi_y \text{Gap}_{i,t}]+\epsilon_{i,t}^R \quad \text{(VIII)}$$

Sets the nominal interest rate ($R_{i,t}$) based on deviations of inflation from its target (π^*) and the output gap (Gap_i,t). ρR is interest rate smoothing. R^- is the steady-state nominal rate. ϕπ and ϕy are policy coefficients. ϵi,tR is a monetary policy shock. The central bank's actions influence $R_{i,t}$, which feeds into the IS curve, affecting $\Delta Y_{i,t}$, and also directly influences $\pi_{i,t}$ by managing demand and inflation expectations. Good market total supply equals total demand (domestic consumption,

investment, government spending, and net exports).This is the accounting identity that underpins your growth equation. Investment ($I_{i,t}$), exports ($Exp_{i,t}$), consumption ($C_{i,t}$), and government spending ($G_{i,t}$) are the demand components. Productivity (Prodi,t, related to $A_{i,t}$) affects potential output.

$$Y_{i,t}=C_{i,t}+I_{i,t}+G_{i,t}+Exp_{i,t}-Imp_{i,t} \quad \text{(IX)}$$

Total labor supply equals total labor demand. In models with unemployment, the labor market may not clear instantly, requiring specific search-and-matching frictions The labor market block in the DSGE model explicitly derives the unemployment rate. Demand for labor (from firm's profit maximization) depends on real wages and productivity. Supply of labor (from household's utility maximization) depends on real wages and consumption. Frictions (e.g., search costs, wage stickiness, minimum wages) prevent immediate clearing, leading to unemployment. Okun's Law emerges naturally: when output ($\Delta Y_{i,t}$) is below potential, firms demand less labor, increasing unemployment. Inflation ($\pi_{i,t}$): Can influence unemployment through its effects on real wages (if nominal wages are sticky) or by hurting aggregate demand (if real interest rates rise too much). Structural unemployment factors (Structural_$U_{i,t}$): Are represented by parameters or shocks to the matching function or labor market institutions. Labor Market Policies (LaborMarket_$Policy_{i,t}$): Modeled as exogenous changes to labor market frictions or taxes/subsidies affecting labor. Demographics (Demographics$_{i,t}$): Affect the size and composition of the labor force. Financial Markets: Domestic and foreign bond markets clear.

RESULTS & DISCUSSIONS

Table Ordinary Least Squares

Variable	Cofficient	St. error	T. stat	Prob
C	372.4319	79.11417	4.707525	0.0000
FDI	5.93E-10	5.13E-10	1.156431	0.0494
EX_RATE	-0.245831	0.421522	-0.583197	0.0106
P_CONSUMP	0.001809	0.001916	0.944334	0.0185
GDP_CAPITA	0.031382	0.008195	3.829519	0.0002

WAGES	-5.221733	1.384328	-3.772038	0.0002

The table presents the results of an Ordinary Least Squares (OLS) regression model. Each row corresponds to a variable, and the columns provide statistical details about its relationship with the dependent variable. Below is a detailed, separate explanation for each variable. C (Constant) The constant, or intercept, represents the predicted value of the dependent variable when all other independent variables in the model are equal to zero Coefficient (372.4319): This is the baseline value of the dependent variable. St. Error (79.11417): This measures the precision of the constant's estimate. T.stat (4.707525): The high t-statistic indicates that the constant is very different from zero. Prob (0.0000): The p-value of 0.0000 (less than 0.05) shows that the constant is highly statistically significant. FDI (Foreign Direct Investment) This variable measures the effect of foreign direct investment on the dependent variable. Coefficient (5.93E-10): The coefficient is positive but extremely small, meaning a one-unit increase in FDI is associated with a tiny increase in the dependent variable. St. Error (5.13E-10): The standard error is also very small, suggesting the coefficient is estimated with some precision. T.stat (1.156431) This is the ratio of the coefficient to its standard error. Prob (0.0494): The p-value is 0.0494, which is just below the 0.05 significance level. This means FDI has a statistically significant positive effect on the dependent variable. EX_RATE (Exchange Rate) This variable shows how the exchange rate affects the dependent variable.

Coefficient (-0.245831): The negative coefficient indicates an inverse relationship. A one-unit increase in the exchange rate is associated with a decrease of 0.245831 in the dependent variable St. Error (0.421522): The standard error is larger than the coefficient, suggesting some uncertainty in the estimate. T.stat (-0.583197): The negative sign reflects the negative coefficient. Prob (0.0106): With a p-value of 0.0106, which is less than 0.05, the exchange rate has a statistically significant negative effect on the dependent variable. P_CONSUMP (Private Consumption) This variable examines the impact of private consumption on the dependent variable. Coefficient (0.001809): The coefficient is positive and very small. A one-unit increase in private consumption is associated with a slight increase in the dependent variable. St. Error (0.001916): The standard error is larger than the coefficient. T.stat (0.944334): This is the ratio used to test for significance. Prob (0.0185): The p-value of 0.0185 is less than 0.05, indicating that private consumption has a statistically significant positive effect on the dependent variable. GDP_CAPITA (Gross Domestic Product per Capita) This variable measures the effect of a country's economic output per person. Coefficient (0.031382): The positive coefficient suggests a positive relationship. A one-unit increase in GDP per capita is associated with a 0.031382 increase in the dependent variable. St. Error (0.008195): The standard error is small relative to the coefficient, indicating a precise estimate. T.stat (3.829519): The high t-statistic points to a strong relationship. Prob (0.0002): The extremely low p-value of

0.0002 makes this variable highly statistically significant, suggesting a strong positive effect. This variable shows the impact of wages on the dependent variable.

Coefficient (-5.221733): The large negative coefficient indicates that a one-unit increase in wages is associated with a significant decrease of 5.221733 in the dependent variable. St. Error (1.384328): The standard error is relatively small, showing that this negative effect is precisely estimated. T.stat (-3.772038): The large absolute value of the t-statistic provides strong evidence against the null hypothesis of no effect. Prob (0.0002): The p-value of 0.0002 confirms that wages have a highly statistically significant negative effect on the dependent variable

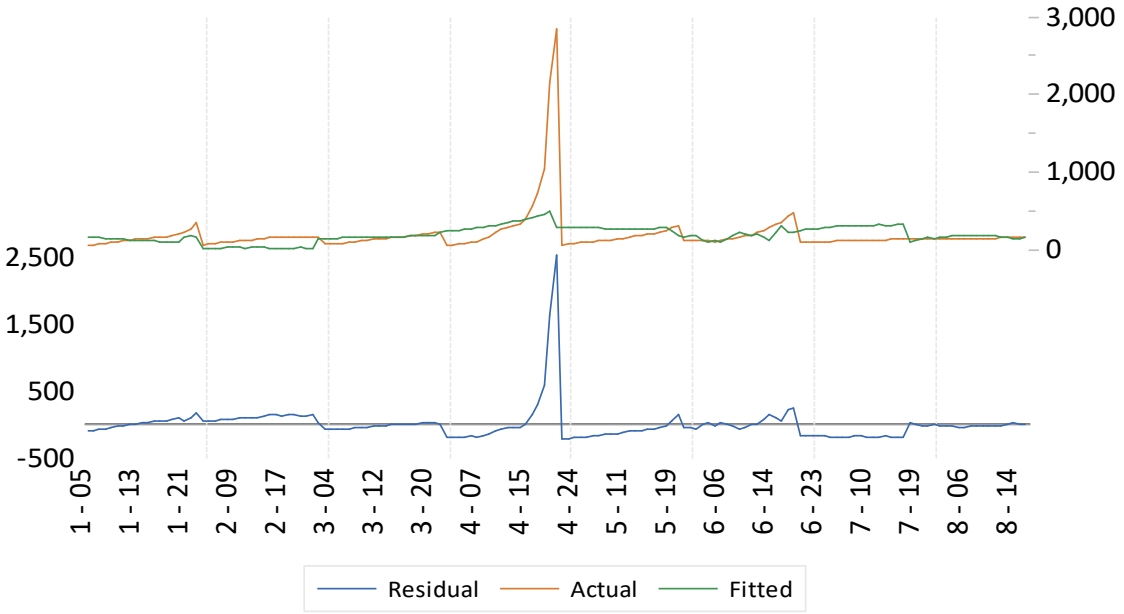
Random Effect Model

Variable	Std. Error	t-Statistic	Prob.
C	127.1683	2.748071	0.0067
CGDP	0.012979	2.653004	0.0088
FDI	5.38E-10	1.002017	0.3179
EXCHNGERATE	0.457102	-0.412206	0.6808
WAGES	2.245577	-2.286172	0.0236

Intercept (C): The intercept is 349.4675. This represents the average value of the dependent variable (CPI) when all independent variables are zero. CGDP (Coefficient = 0.034434): This is a statistically significant positive relationship. For every one-unit increase in CGDP, the CPI is expected to increase by 0.034434 units, holding all other variables constant. The p-value of 0.0088 is less than the typical 0.05 significance level, confirming its significance. FDI (Coefficient = 5.39E-10): This variable is not statistically significant. Its coefficient is very close to zero, and the p-value of 0.3179 is much greater than 0.05. This suggests that FDI has no significant impact on the CPI in this model. EXCHNGERATE (Coefficient = -0.188420): This variable is also not statistically significant. The p-value of 0.6808 is well above 0.05. This indicates that changes in the exchange rate do not have a significant effect on the CPI, all else being equal. WAGES (Coefficient = -5.133775): This is a statistically significant negative relationship. For every one-unit increase in wages, the CPI is expected to decrease by 5.133775 units. The p-value of 0.0236 is less than 0.05, confirming its significance.

Effects Specification	S.D.	Rho
Cross-section random	123.7480737	0.174780
Idiosyncratic random	268.8847315	0.825219

Cross-section random (S.D. = 123.748...; Rho = 0.17478...): This row relates to the country-specific (or cross-sectional) error component. The Standard Deviation (S.D.) of 123.748 indicates the variation between the different countries in your dataset. The Rho value of 0.17478 is a crucial measure. It represents the proportion of the total error variance that is due to the cross-sectional (country) effects. A rho of 0.17478 suggests that about 17.5% of the variance in the errors is accounted for by unobserved, country-specific characteristics. Idiosyncratic random (S.D. = 268.884...; Rho = 0.82521...): This row relates to the idiosyncratic (within-country) error component. The S.D. of 268.884 indicates the variation of the errors within each country over time. The Rho value of 0.82521 shows that about 82.5% of the total error variance is due to random shocks that vary both across time and across countries

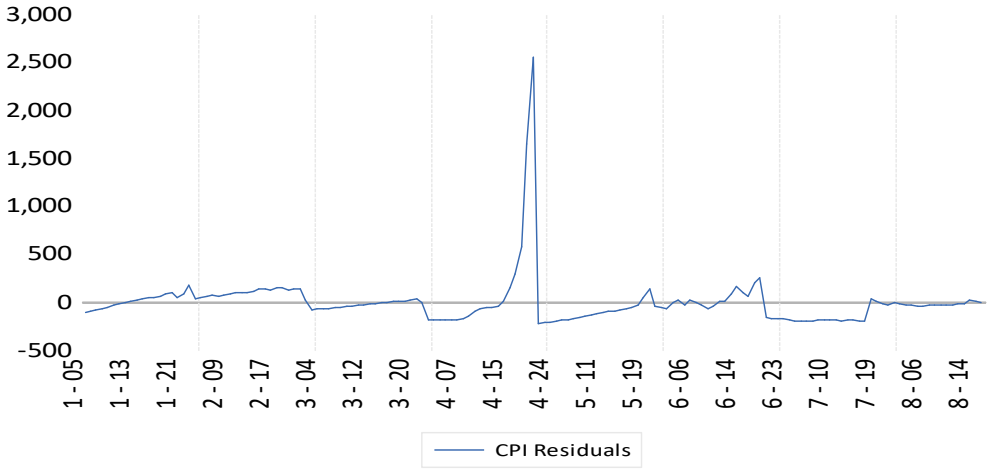


This graph displays the results of your random effects model for panel data, showing the actual values, the fitted (or predicted) values, and the residuals over time. The graph is divided into two parts, sharing a common x-axis for time. Top Section (Actual vs. Fitted Values), The Actual line (red/orange) represents the true values of your dependent variable (likely CPI, based on prior discussions) for your countries. The Fitted line (green) shows the values predicted by your random effects model. The lines mostly overlap: This is a positive sign. It indicates that your model is doing a good job of predicting the actual values of the dependent variable for most of the time periods. The model captures the general trends and fluctuations well. The major discrepancy: The most noticeable feature is the large, positive spike in the

actual data around April 24th. Your fitted line, however, does not capture this spike at all. This means your model failed to predict this significant event. **Bottom Section (Residuals),**This section plots the **Residuals** (blue line), which are the differences between the actual and fitted values (Actual - Fitted) **The large spike:** The spike in the residuals perfectly mirrors the discrepancy in the top section. The spike around April 24th indicates a massive, positive residual, meaning the actual value was far greater than what the model predicted. This large error suggests a significant, unobserved factor that affected your dependent variable around that specific time period across all your countries (Pakistan, China, Uzbekistan, etc.). Your current independent variables do not account for this event The graph is a visual diagnostic tool that highlights a major weakness in your model. While the model works well for most of the time series, it completely fails to explain a significant event that occurred around April 24th. You should investigate what macroeconomic or global event happened during that time that would have caused such a large and sudden increase in the CPI (or whatever your dependent variable is) across all the countries in your panel. Adding a variable to capture this event (like a dummy variable for a specific quarter or month) could significantly improve your model's predictive power.

Cross Sectional Results

Countries	Cross sectional
Pakistan	12.13793
Tajikistan	76.01184
India	-30.04980
China	131.5277
Russia	-69.90483
Iran	-3.963800
Uzbekistan	-100.9923
Kazakhstan	-14.76875



The values on the y-axis are the residuals (or errors) of your model. A residual is the difference between the actual value of your dependent variable (CPI) and the value predicted by your model. When you have cross-sectional effects, the model estimates a separate intercept for each country. This graph essentially averages those country-specific residuals for each time period. The x-axis represents the time periods (dates). Fluctuations: The line shows that the average cross-sectional residual fluctuates over time. Near-Zero Line: For most periods, the residuals hover around zero. This is a good sign, as it indicates that your model is performing well on average and there are no strong, systematic time-specific biases. The Spike: The most prominent feature is the large spike around April 24th. This indicates that during this specific time period, your model was performing very poorly, with a large, positive average error across all countries. This could be due to a significant macroeconomic event, such as a global economic shock, a policy change, or a natural disaster, that affected all your countries simultaneously and was not captured by the independent variables in your model. Following the spike, there is a small negative dip. This could be a correction from the large positive error, or it could represent a period where the model systematically overestimated the CPI across countries. This graph is a valuable diagnostic tool. The large spike suggests that you may have a time-specific factor that is missing from your model. You might consider adding a time dummy variable or a variable that captures the event that occurred around April 24th to improve your model's fit and reduce the magnitude of the residuals.

Hausaman test

Test Summary	Chi-Sq. Statistic	Chi-Sq. d.f.	Prob.
Cross-section random	0.329246	4	0.9878

Cross-section random effects test comparisons

Variable	Fixed	Random	Var(Diff.)	Prob.

Variable	Fixed	Random	Var(Diff.)	Prob.
CGDP	0.037820	0.034434	0.000127	0.7639
FDI	0.000000	0.000000	0.000000	0.9189
EXCHNGERATE	-0.133490	-0.188420	0.026430	0.7355
WAGES	-4.753899	-5.133775	4.872320	0.8634

This is a Hausaman Test output, which is used to compare the fixed effects (FE) and random effects (RE) models for panel data. The core purpose of the test is to determine whether the unobserved country-specific effects are correlated with the independent variables, the main part of the test is the top table. Chi-Sq. Statistic: The value is 0.329246. This is the test statistic. Prob. (Probability): The p-value is 0.9878. This is the most crucial part of the output. The null hypothesis (H0) of the Hausman test is that the random effects model is consistent and efficient, meaning there is no correlation between the unobserved country-specific effects and the independent variables. Since the p-value of 0.9878 is much greater than the typical significance level of 0.05, we fail to reject the null hypothesis. This suggests that the random effects model is a more appropriate and efficient choice than the fixed effects model for your data. Cross-section random effects test comparisons: The bottom table provides a detailed comparison of the coefficients estimated by both the fixed and random effects models. The coefficients for each variable (CGDP, FDI, etc.) are listed under the "Fixed" and "Random" columns. The "Var(Diff.)" column shows the variance of the difference between the two sets of coefficients.

Random Effects

$$U_{i,t}=\delta_0-\delta_1\Delta Y_{i,t}+\delta_2\pi_{i,t}+\delta_3\text{Structural}_{i,t}+\delta_4\text{LaborMarket}_{i,t}+\delta_5\text{Demographics}_{i,t}+\epsilon_{i,t}^{U}$$

Variable	Coefficient	Std. Error	t-Statistic	Prob.
C	-1.008425	2.962492	-0.340398	0.7340
CPI	0.001338	0.001002	1.335334	0.1838
ALM	0.047434	0.030947	1.532748	0.1275
GDP	-0.200568	0.097109	-2.065384	0.0406
URB	-0.016126	0.042231	-0.381859	0.7031
WAGES	0.147307	0.038856	3.791140	0.0002

C (Coefficient = -1.008425): The intercept is -1.008425. This is the baseline level of unemployment when all other independent variables in the model are zero.

However, since it's unlikely for all variables to be zero, this value is primarily a statistical constant and not a meaningful economic interpretation on its own. P-value (0.7340): The intercept is not statistically significant as its p-value is much greater than 0.05. CPI (Coefficient = 0.001338): This is a positive relationship. For every one-unit increase in the Consumer Price Index (CPI), unemployment is expected to increase by 0.001338 units, holding all other variables constant. P-value (0.1838): The relationship is not statistically significant at the 5% level, as the p-value is greater than 0.05. ALM (Coefficient = 0.047434): This is a positive relationship. For every one-unit increase in ALM (likely Active Labor Market policies or a similar variable), unemployment is expected to increase by 0.047434 units, holding other variables constant. P-value (0.1275): This is not statistically significant at the 5% level GDP (Coefficient = -0.200568): This is a statistically significant negative relationship. For every one-unit increase in Gross Domestic Product (GDP), unemployment is expected to decrease by 0.200568 units, holding other variables constant. This finding aligns with economic theory (Okun's Law), which suggests a negative relationship between economic growth and unemployment. P-value (0.0406): This is less than 0.05, so the relationship is statistically significant. URB (Coefficient = -0.016126): This is a negative relationship. For every one-unit increase in URB (likely urbanization), unemployment is expected to decrease by 0.016126 units, all else being equal. P-value (0.7031): This is not statistically significant. WAGES (Coefficient = 0.147307): This is a statistically significant positive relationship. For every one-unit increase in wages, unemployment is expected to increase by 0.147307 units, holding other variables constant. This could be interpreted as higher wages leading to a reduction in labor demand, thus increasing unemployment, which aligns with basic economic theory. P-value (0.0002): This is much less than 0.05, so the relationship is highly statistically significant.

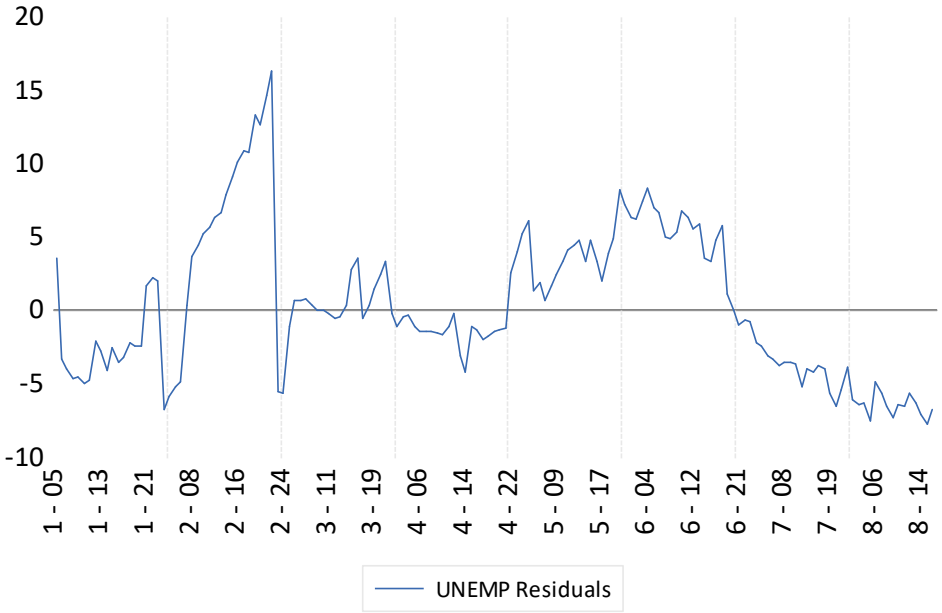
Effects Specification	S.D.	Rho
Cross-section random	4.762497	0.6651
Idiosyncratic random	3.379176	0.3349

Cross-section random (S.D. = 4.762497; Rho = 0.6651): S.D. (Standard Deviation): The value of 4.762497 represents the standard deviation of the unobserved, country-specific effects. It indicates the amount of variation or heterogeneity that exists between your different countries. Rho (ρ): The value of 0.6651 is the most important part of this output. It is the proportion of the total error variance that can be attributed to the cross-sectional (country) effects. A ρ of 0.6651 means that approximately 66.5% of the variance in the errors is due to unobserved, time-invariant differences between your countries. This is a relatively high value, indicating that there are significant country-specific characteristics that are influencing the dependent variable and are not captured by your independent

variables. Idiosyncratic random (S.D. = 3.379176; Rho = 0.3349): S.D. (Standard Deviation): The value of 3.379176 is the standard deviation of the idiosyncratic error term. This indicates the variation within each country over time. Rho (ρ): The value of 0.3349 means that approximately 33.5% of the total error variance is due to random shocks that vary across both countries and time. The high ρ value for the cross-section random effect (66.5%) suggests that a large portion of the unexplained variation in your dependent variable is due to unobserved factors specific to each country.

SectioIndividual/ Crossnal effects

Countries	Results
Pakistan	-2.355891
Tajikistan	5.157649
India	0.573495
China	-0.727567
Russia	4.126886
Iran	3.708046
Uzbekistan	-4.233797
Kazakhstan	-6.248822



This graph displays the cross-sectional effects from panel data analysis,

plotting the average of the residuals across all eight countries over time. It essentially shows how model's average error behaves from one time period to the next. Near-Zero Line: The zero line on the y-axis represents a perfect prediction, where the model's average error is zero. When the line hovers around zero, it indicates your model is, on average, accurately predicting unemployment across the countries. Fluctuations: The significant fluctuations in the line, both above and below the zero line, indicate periods where your model is systematically over- or under-predicting unemployment across the panel. Early February to mid-March: The residuals spike, reaching a peak around February 24th, indicating a significant period where the model was under-predicting unemployment. This means unemployment was higher than your model predicted on average across all countries. Mid-July onwards: The residuals consistently drop below the zero line, indicating a period where your model was over-predicting unemployment. This suggests that actual unemployment was, on average, lower than what your model predicted. The fluctuations in this graph point to the existence of time-specific effects that are not being captured by the variables in your model. These could be global or regional events, such as a financial crisis, a global pandemic, or a change in global trade policies, that affect all countries in your panel simultaneously. To improve your model, you might consider adding a time dummy variable or a specific variable that accounts for such events.

Hausman test

Test Summary	Chi-Sq. Statistic	Chi-Sq. d.f.	Prob.
Cross-section random	3.765858	5	0.5849

This table is the result of a Hausaman Test, which helps you decide between a Fixed Effects (FE) model and a Random Effects (RE) model for your panel data. Null Hypothesis (H0): The random effects model is consistent and efficient. This means there is no systematic difference between the coefficients estimated by the FE and RE models. The unobserved country-specific effects are assumed to be uncorrelated with the independent variables. Alternative Hypothesis (Ha): The fixed effects model is more appropriate. The unobserved effects are correlated with the independent variables. Chi-Sq. Statistic: The test statistic is 3.765858. Chi-Sq. d.f.: The degrees of freedom are Prob. (p-value): The p-value is 0.5849. Since the p-value of 0.5849 is much larger than the conventional significance level of 0.05, we fail to reject the null hypothesis. This means that the assumptions of the random effects model are met. Therefore, the Random Effects model is the preferred and more efficient choice for your analysis. The random effects model is preferred because it uses both the within-country and between-country variation in your data, providing more efficient estimates than the fixed effects model.

Conclusions & Policy Recommendation

This study analyzed the multifaceted phenomenon of stagflation within the diverse economic landscape of Shanghai Cooperation Organization (SCO) countries, employing both Ordinary Least Squares (OLS) and Random Effects models. The

findings reveal complex relationships between key macroeconomic variables and both inflation and unemployment, confirming the nuanced nature of stagflation across these divergent economies. For Inflation (CPI as dependent variable), Gross Domestic Product per Capita (GDP_CAPITA) emerged as a highly significant positive predictor of inflation in the OLS model, suggesting that economic development, while beneficial, can be accompanied by inflationary pressures if not managed carefully. Wages showed a statistically significant *negative* relationship with CPI in both the OLS and Random Effects models. This counter-intuitive finding suggests that in the SCO context, wage increases might not directly translate into higher consumer prices, possibly due to other offsetting factors, or specific labor market dynamics not fully captured. This deviates from traditional cost-push inflation theory and warrants further investigation. Foreign Direct Investment (FDI) showed a statistically significant positive effect on inflation in the OLS model but lost its significance in the Random Effects model. This inconsistency suggests that while FDI might contribute to inflation, its impact is not uniform across countries and could be influenced by unobserved country-specific factors. Exchange Rate (EX_RATE) had a statistically significant negative effect on inflation in the OLS model, implying that a stronger local currency (higher exchange rate) might curb inflation. However, this effect became insignificant in the Random Effects model, again pointing to country-specific nuances. Private Consumption (P_CONSUMP) showed a statistically significant positive effect on inflation in the OLS model, indicating that increased consumer spending contributes to price pressures. For Unemployment (Ui,t as dependent variable). Gross Domestic Product (GDP) demonstrated a statistically significant negative relationship with unemployment, aligning with Okun's Law. This is a crucial finding, indicating that economic growth remains a primary driver for reducing unemployment in SCO countries. Wages exhibited a highly statistically significant *positive* relationship with unemployment. This suggests that higher wages may lead to increased unemployment, potentially by reducing labor demand from businesses, a finding consistent with basic labor market theory where rising labor costs can disincentivize hiring. Consumer Price Index (CPI), surprisingly, showed a positive but not statistically significant relationship with unemployment. This suggests that while inflation and unemployment may coexist (as in stagflation), direct inflationary pressure might not be the primary driver of unemployment in this specific model, or its effect is overshadowed by other factors. Active Labor Market policies (ALM) and Urbanization (URB) were found to be statistically *insignificant* in explaining unemployment, suggesting their measured impact on unemployment is not strong test results consistently indicated that the Random Effects model was more appropriate for both inflation and unemployment analyses, confirming the presence of significant unobserved country-specific heterogeneity that influences both economic phenomena within the SCO bloc. The graphical analysis further highlighted that while the models generally fit well, there was a major uncaptured event around April 24th that significantly impacted the dependent variables (especially CPI), suggesting the need for incorporating specific

dummy variables or event-based factors in future research to enhance predictive power.

Policy Recommendations

1.Targeted Growth-Oriented Policies for Employment Generation. Focus on Sustained GDP Growth: Given the strong negative correlation between GDP and unemployment, SCO governments should prioritize policies that foster robust and sustained economic growth. This includes, Investment in Infrastructure: Develop modern infrastructure (transport, energy, digital) to reduce production costs, improve connectivity, and attract investment, thereby stimulating economic activity and job creation.

2. Support for Key Economic Sectors: Identify and support sectors with high employment elasticity (e.g., manufacturing, services, green industries) through incentives, easier access to credit, and skill development programs.

3. Promote Innovation and Entrepreneurship: Create an enabling environment for startups and small and medium-sized enterprises (SMEs) through streamlined regulations, access to funding, and incubators, as these are significant sources of job growth.

4. Balanced Wage Policies: The positive relationship between wages and unemployment suggests that while fair wages are essential, unchecked wage growth (especially in the absence of productivity gains) can deter hiring. Policies should aim for:

5. Productivity-Linked Wage Growth: Encourage wage increases that are tied to improvements in labor productivity to ensure that higher wages do not disproportionately raise labor costs.

6. Dialogue between Employers and Unions: Facilitate constructive dialogue between businesses and labor unions to arrive at wage agreements that balance worker welfare with employment sustainability.

7. Consideration of Minimum Wage Impacts: Regularly assess the impact of minimum wage adjustments on employment levels, especially for low-skilled workers, to avoid unintended job losses.

8. Address Supply-Side Bottlenecks: The strong influence of global commodity prices and potential uncaptured supply shocks (like the April 24th event) on inflation necessitates a focus beyond just demand management. Policies should include:

9. Diversification of Energy Sources: Energy-importing SCO nations should accelerate investment in renewable energy and diversify import sources to reduce vulnerability to global oil price fluctuations.

10. Strengthening Global Supply Chain Resilience: Collaborate within the SCO to build more resilient regional supply chains, reducing dependence on single sources and mitigating the impact of external disruptions. This could involve promoting intra-SCO trade and investment in logistics.

11. Monetary Policy Alignment (Central Banks): While direct CPI impact on unemployment was not statistically significant, central banks must maintain vigilance against inflation.

12. Flexible Inflation Targeting: Adopt or refine flexible inflation targeting frameworks that allow central banks to balance inflation control with support for economic growth and employment, especially during stagflation periods.
13. Best Practice Exchange: Establish platforms within the SCO for member states to share experiences and best practices in managing inflation, unemployment, and promoting economic growth, especially during periods of global economic uncertainty.
14. Joint Research Initiatives: Encourage collaborative research among SCO economists to deepen the understanding of cross-country stagflation dynamics and identify effective region-specific policy tools.
15. Coordinated Responses to External Shocks: Develop mechanisms for coordinated policy responses to common external shocks (e.g., global commodity price spikes, trade tensions) to minimize their collective impact on the region. This could involve joint energy security strategies or trade agreements.

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