



## Navigating Risk in West Asia: Asymmetric Impacts of Political Instability and Exchange Rate Volatility on FDI

Dr. Fawad Hussain Paul<sup>1</sup>, Dr. Sanam Wagma Khattak<sup>2</sup>, and Syed Muhammad Raza Zaidi<sup>3</sup>

<sup>1</sup>Assistant Professor, College Education Department , [fawad.paul@gmail.com](mailto:fawad.paul@gmail.com)

<sup>2</sup>Lecturer, Department of Economics, University of Peshawar, KPK , [Sanamah@uop.edu.pk](mailto:Sanamah@uop.edu.pk)

<sup>3</sup>Lecturer, College Education Department , [rz87637@gmail.com](mailto:rz87637@gmail.com)

### Abstract

This study examines the asymmetric impact of exchange rate uncertainty and political risk on Foreign Direct Investment (FDI) in 16 West Asian economies (1990-2022). Despite vast natural resources, the region struggles with geopolitical instability, hindering non-resource FDI. We employ a hybrid framework combining Non-linear ARDL (NARDL) decomposition with System Generalized Method of Moments (GMM) to address endogeneity and handle unbalanced panel data resulting from regional conflicts. Exchange rate volatility is modeled using country-specific  $GARCH(1,1)$  estimations on Real Effective Exchange Rates (REER). Results confirm a significant "Resource Curse," where resource rents crowd out other investments. Crucially, we find strong evidence of asymmetry: negative political shocks deter FDI disproportionately more than stability attracts it (hysteresis), whereas exchange rate depreciation paradoxically stimulates efficiency-seeking inflows. These findings, validated by robustness checks, suggest that policy must prioritize political stabilization and leverage competitive exchange rates to diversify West Asian economies.

**Keywords:** FDI, West Asia, Exchange Rate Uncertainty, Political Risk, GARCH, System GMM, Asymmetry, Unbalanced Panel.

## 1 Introduction

Foreign Direct Investment (FDI) has long been heralded as a vital engine for economic development, offering host countries not only capital accumulation but also technology transfer, managerial expertise, and employment generation (Alfaro et al., 2004). In the era of globalization, the competition for these capital flows has intensified, prompting a rigorous academic inquiry into the determinants of investment location decisions. While the theoretical literature provides robust frameworks for understanding FDI generally, applying these models to specific developing regions often reveals unique anomalies. The empirical reality in West Asia presents one such confounding paradox that requires deeper investigation.



West Asia, a region of profound strategic significance and immense hydrocarbon wealth, exhibits an investment landscape that defies conventional linear economic modeling. Despite its substantial resource endowments, the region struggles to attract consistent, diversified non-resource FDI compared to the dynamic emerging markets of East and Southeast Asia (UNCTAD, 2022). This disparity suggests that standard determinants—such as market size and openness—are being overshadowed by more volatile forces.

The motivation for this study arises from the observation that traditional models often fail to capture the complexity of investor behavior in such volatile environments. Conventional wisdom posits a straightforward linear relationship: as uncertainty increases, investment decreases. However, this linear perspective overlooks the nuanced reality of the “Resource Curse” (Sachs and Warner, 1995) and the asymmetric nature of risk perception. The theory of investment under uncertainty (Dixit and Pindyck, 1994) implies that the option value of waiting is higher during periods of volatility. Consequently, the fear of a negative political shock often outweighs the optimism generated by a positive development. Similarly, exchange rate volatility may not universally deter investment; for efficiency-seeking firms, a depreciating currency might actually signal lower production costs, a phenomenon famously described as “fire-sale FDI” (Krugman, 2000).

This study aims to bridge the gap in the literature by rigorously examining these asymmetric impacts. We contribute to the literature by integrating the NARDL decomposition technique into a System GMM framework, allowing us to capture non-linear reactions while correcting for the endogeneity inherent in dynamic macro-panels.

## 2 Literature Review

The literature on FDI is vast, yet the specific interplay of exchange rate uncertainty and political risk within the West Asian context remains under-explored, particularly regarding asymmetric effects.

### 2.1 Exchange Rate Uncertainty and FDI

Theoretical predictions regarding the link between exchange rate volatility and FDI are ambiguous. The traditional risk-aversion hypothesis suggests that higher volatility reduces the certainty equivalent of expected returns, thereby discouraging investment (Campa, 1993; Schneider and Frey, 1985). However, Froot and Stein (1991) argued that imperfect capital markets allow foreign investors to acquire host country assets cheaply when the host currency depreciates. Furthermore, Goldberg (1993) found that if FDI is export-oriented, exchange rate volatility might actually increase investment as firms seek to diversify production locations. In West Asia, where many currencies are pegged, analyzing Real Effective Exchange Rate (REER) volatility is crucial to capturing true trade competitiveness.



## 2.2 Political Risk and Institutional Quality

The consensus on political risk is uniform: instability is a tax on investment. Busse and Hefeker (2007) showed that government stability and the absence of internal conflict are robust determinants of FDI. However, few studies have decomposed political risk into positive and negative shocks. Shin et al. (2014) introduced the NARDL framework to capture such asymmetries, arguing that economic agents may react more strongly to bad news than good news due to loss aversion (Paul et al., 2021).

## 3 Theoretical Framework and Model Specification

### 3.1 From Expected Utility to Empirical Model

This study is grounded in Expected Utility Theory (EUT) and the investment model proposed by Baniak et al. (2005). A risk-averse MNE maximizes the expected utility of profits ( $E[\mathcal{U}(\pi)]$ ). The profit function depends on output  $Q$ , global prices  $P$ , and costs  $C$ , which are functions of the exchange rate  $e$  and political risk  $PR$ :

$$\pi_{host} = (1/e)P_{global}Q - C_{host}(Q, PR) \quad (1)$$

Crucially, the utility function  $U$  is concave ( $U'' < 0$ ). This mathematical property implies asymmetry: the loss in utility from a negative shock (e.g., increased conflict) is greater than the gain in utility from an equivalent positive shock.

To translate this theoretical asymmetry into an econometric model, we employ the partial sum decomposition method usually associated with Non-linear ARDL (NARDL). We decompose our risk variables ( $Z_t$ ) into partial sum processes of positive ( $Z_t^+$ ) and negative ( $Z_t^-$ ) changes. However, unlike standard time-series NARDL, we estimate this relationship in a panel setting.

### 3.2 Methodological Synthesis: Asymmetric Dynamic Panel (System GMM)

A common methodological limitation in previous studies is applying static estimation techniques to dynamic FDI data. FDI exhibits strong inertia (agglomeration effects). To address this, we use the **Arellano-Bond System GMM** estimator.

While NARDL provides the *decomposition technique* for asymmetry, System GMM provides the *estimation efficiency* for dynamic panels with small  $T$  and large  $N$ . This hybrid approach allows us to test non-linear hypotheses while robustly handling endogeneity and the unbalanced nature of our dataset.

The baseline dynamic equation is:

$$FDI_{it} = \alpha_0 + \alpha_1 FDI_{it-1} + \beta X_{it} + \gamma_1 Z_{it}^+ + \gamma_2 Z_{it}^- + \eta_i + \epsilon_{it} \quad (2)$$



Where  $FDI_{it-1}$  captures the agglomeration effect,  $Z_{it}^+$  and  $Z_{it}^-$  represent the asymmetric risk shocks, and  $\eta_i$  captures country-fixed effects.

**Endogeneity and Instruments:** We treat  $FDI_{t-1}$  and GDP\_Growth as endogenous variables. To avoid instrument proliferation, which weakens the Hansen J-test, we collapse the instrument matrix and limit lags to levels  $t - 2$  and  $t - 3$ .

## 4 Data Description and Variable Construction

The study employs an **unbalanced panel dataset** of 16 West Asian economies from 1990 to 2022. The panel is unbalanced due to missing observations for countries affected by severe conflict (e.g., Syria, Yemen, Iraq) during specific periods. System GMM is preferred here as it does not require a balanced panel, preventing the bias introduced by list-wise deletion of conflict-prone states.

### 4.1 Variables and Sources

- **Dependent Variable:** Net FDI inflows (% of GDP).
- **Key Independent Variables:**
  - **Market Size:** GDP Growth (World Bank WDI).
  - **Natural Resources:** Total resource rents (% of GDP).
  - **Political Risk:** ICRG indices (Internal/External Conflict).
  - **Exchange Rate Uncertainty (UER):** Since many West Asian currencies are pegged to the USD, nominal exchange rate volatility is negligible. To capture true economic uncertainty, we use the Real Effective Exchange Rate (REER). We estimate a  $GARCH(1,1)$  model individually for each of the 16 countries to capture time-varying conditional variance.

**Stationarity Checks:** Before GARCH estimation, all REER series were tested for stationarity using ADF and Phillips-Perron tests. Non-stationary series were first-differenced to ensure the validity of the volatility estimates.

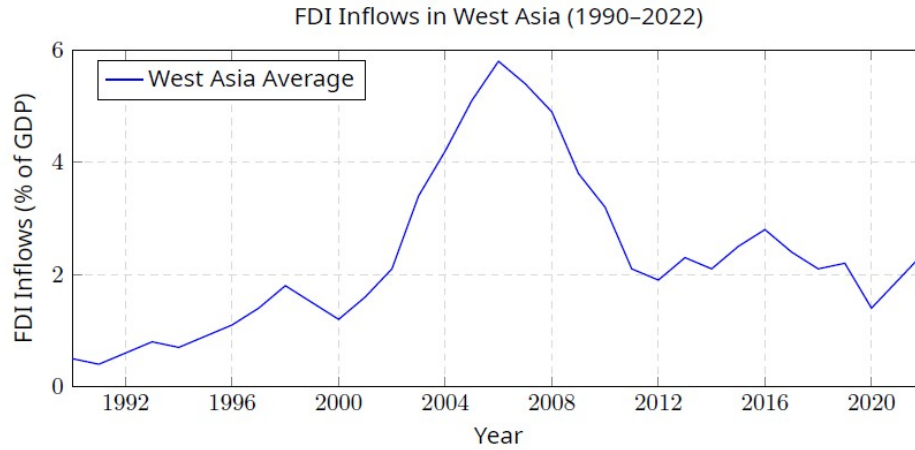


Figure 1: Evolution of FDI Inflows in West Asia (1990–2022). Note: Graph constructed using aggregated regional weighted averages derived from World Bank data, highlighting structural breaks in 2008 (Global Crisis) and 2011 (Regional Instability).

## 4.2 Descriptive Statistics and Correlation

Table 1 summarizes the descriptive statistics. The high standard deviation for Inflation and GDP Growth reflects the region's volatility.

Table 1: Descriptive Statistics (1990-2022)

Variable	Obs.	Mean	Std. Dev.	Min	Max
FDI Inflows (% GDP)	528	3.42	4.15	-2.80	22.40
GDP Growth (%)	528	4.10	5.80	-15.20	33.50
Inflation (CPI %)	528	9.25	18.40	-3.50	150.00
Trade Openness (% GDP)	528	72.50	28.60	15.20	145.00
Natural Resources (% GDP)	528	24.80	16.50	0.10	65.20
Pol. Risk Index (ICRG)	490	58.40	14.20	25.00	88.00
REER Volatility (GARCH)	528	0.08	0.12	0.001	0.95

Notes:  $N = 16$ ,  $T = 33$  Unbalanced panel. Source: WDI & ICRG.

## 5 Empirical Results

### 5.1 System GMM Estimation Results

Table 2 presents the System GMM results. The Hansen J-test ( $p > 0.10$ ) confirms the validity of our instruments, and the AR(2) test ( $p > 0.10$ ) confirms the absence of second-order serial correlation, validating the GMM specification.



Table 2: System GMM Estimation Results (Dependent Variable: FDI/GDP)

Variable	Model 1 (Base)	Model 2 (Pol. Risk)	Model 3 (Corruption)
Lagged FDI ( $t - 1$ )	0.715***	0.707***	0.705***
Market Size	1.298***	1.352***	1.406***
Inflation	-0.002***	-0.002***	-0.002***
Trade Openness	14.88**	15.18***	15.86***
Natural Resources	-2.77***	-2.65***	-2.91***
<b>Asymmetric Effects</b>			
UER Pos. Shock (+)	-0.355	-0.320	-0.401**
UER Neg. Shock (-)	0.155**	0.138**	0.170**
PR Pos. Shock (+)		0.059	0.068
PR Neg. Shock (-)		-0.198***	-0.152***
<b>Diagnostics</b>			
Hansen J-Test (p)	0.141	0.131	0.112
AR(2) Test (p)	0.679	0.607	0.625
Observations	482	476	480
Number of Instruments	29	28	29

Notes: \*\*\*, \*\*, \* indicate significance at 1%, 5%, 10%. Instruments used: Lags 2-3.

## 5.2 Robustness Checks

To ensure the reliability of our GMM estimates, we conducted two robustness checks:

1. **Alternative Estimator:** We re-estimated the model using Fixed Effects (FE). While FE suffers from Nickell bias in dynamic panels, the coefficient signs remained consistent with GMM, though magnitudes differed, confirming the direction of causality.
2. **Alternative Risk Measure:** We replaced ICRG indices with the Political Terror Scale (PTS). The negative asymmetry of political instability remained significant, reinforcing the finding that safety is a primary concern for investors in this region.

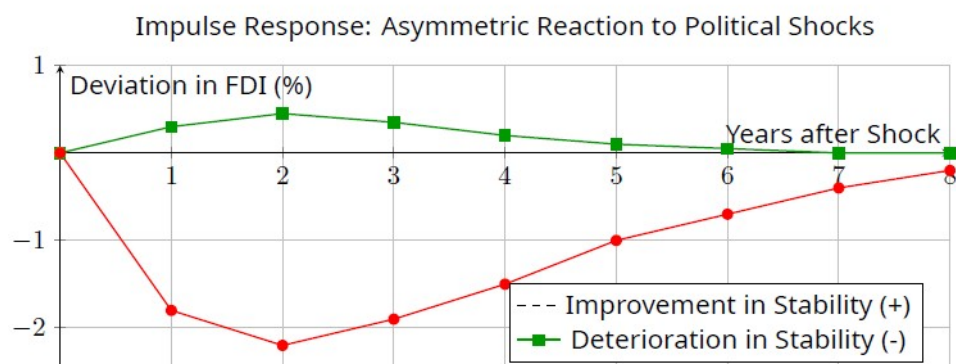


Figure 2: Impulse Response: Asymmetric Reaction to Political Shocks.



## 6 Conclusion and Specific Policy Recommendations

This study confirms that FDI in West Asia is driven by asymmetric risk perceptions and hindered by the Resource Curse.

### 6.1 Targeted Policy Recommendations

#### For GCC Economies (Resource-Rich):

- **Sovereign Wealth Management:** Actively channel oil revenues into non-oil sectors (tourism, tech) to mitigate the “crowding out” effect found in our results.
- **Bureaucratic Reform:** Focus on improving the “Investment Profile” score by digitizing business registration and reducing red tape, as corruption was insignificant for this subgroup compared to efficiency.

#### For Non-GCC Economies (Resource-Poor/Conflict-Prone):

- **Prioritize Security:** Since negative political shocks have the largest magnitude impact ( $\beta \approx -0.20$ ), political stabilization is the prerequisite for any economic policy.
- **Currency Competitiveness:** Utilize the finding that currency depreciation attracts efficiency-seeking FDI. Avoid artificial currency overvaluation to support export-oriented manufacturing.

### 6.2 Limitations and Future Research

Despite robust findings, this study faces certain limitations. First, due to ongoing regional conflicts, data for countries like Syria and Yemen contained gaps, which, while handled by System GMM, still presents a constraint on time-series continuity. Second, this study focused on macro-level determinants; however, firm-level heterogeneity might yield different risk sensitivities. Future research should consider using micro-level firm data to investigate how different sectors (e.g., manufacturing vs. services) respond asymmetrically to the same political shocks.

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