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Asymmetric Influence of Exchange Rate Fluctuation and Political Stability on Foreign Direct Investment: An Empirical Investigation for South Asian Economies

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Abstract

Foreign Direct Investment (FDI) plays a critical role in promoting economic growth, yet South Asian economies face persistent challenges in attracting sustainable inflows due to exchange rate volatility and political instability. The uncertainty created by abrupt currency fluctuations and governance weaknesses undermines investor confidence and deters long-term commitments. Addressing these challenges requires a deeper understanding of how these factors interact to shape FDI patterns in the region. The objective of this study is to investigate the asymmetric effects of exchange rate fluctuations by distinguishing between appreciation and depreciation shocks and political stability on FDI, while accounting for trade openness, inflation, and economic growth as control variables. Using annual panel data for South Asian economies and applying nonlinear autoregressive distributed lag (NARDL) techniques, the study captures short and long run asymmetric dynamics. The results reveal that depreciation shocks have a stronger negative impact on FDI than appreciation shocks and that political stability significantly moderates the effects of exchange rate movements. Furthermore, greater trade openness and sustained economic growth are found to enhance FDI inflows, whereas high inflation exerts a deterrent effect. These findings emphasize the need for integrated policy frameworks aimed at stabilizing exchange rates, improving governance quality, fostering macroeconomic stability, and maintaining open trade regimes. In light of the evidence, it is recommended that South Asian policymakers pursue coordinated monetary and fiscal measures, strengthen institutional capacity, and create a secure investment climate to attract and retain foreign investors.

Keywords: Foreign Direct Investment, exchange rate fluctuation, political stability, trade openness, South Asia

Introduction

Investment is a critical component of any economy, as it stimulates the activation of sufficient demand determinants, thereby enhancing the country's economic development. A country's national financial component, foreign direct investment (FDI) is the investment of foreign investors in the domestic country (Bilawal et al., 2014). FDI is essential for the development of a

nation's economy. It enhances economic events, expands practical limits, and raises the monetary development rate, thereby enhancing social and financial circumstances (Louail & Zouita, 2021). Foreign direct investment (FDI) is a critical element of the substantial private investments that drive global economic expansion. FDI is associated with a variety of economic benefits, including capital, foreign exchange, competition, technology, and extensive access to the global market. The pattern of foreign direct investment has evolved from a developed country to a rising country in the globe over the past two decades (Paul et al., 2021). Foreign investors demonstrate a strong interest in allocating their funds to a host nation that can establish a business environment that is conducive, facilitate the creation of secure investments, reduce tax burdens, stabilize exchange rates, and minimize economic indebtedness (Haque et al., 2022).

Foreign direct investment (FDI) flows are substantially influenced by exchange rate fluctuations, particularly in emerging markets. By reducing the relative cost of assets and production, a depreciation of the domestic currency can attract FDI, thereby making investments more alluring to foreign firms. Nevertheless, investors are generally discouraged by exchange rate volatility as a result of the potential financial losses and increased uncertainty (Ullah et al., 2012). Evidence from South Asia indicates that moderate and predictable depreciation can stimulate inflows, whereas excessive fluctuations can erode investor confidence, thereby restricting long-term commitments (Sharifi-Renani & Mirfatah, 2012). Autoregressive distributed lag (ARDL) analysis in Pakistan indicates that exchange rate depreciation promotes FDI in the long term, while volatility has a detrimental effect (Ullah et al., 2012). These results emphasize the necessity for policymakers to preserve exchange rate stability while simultaneously promoting a favorable investment environment through competitive currency valuations.

Additionally, foreign direct investment (FDI) inflows are significantly influenced by the political environment. Fiscal policies and diplomatic relationships can be improved by a stable political environment and fair elections, which in turn increases the country's appeal to foreign investors. In contrast, a fraudulent political environment can result in an increase in the cost of conducting business, which can discourage foreign investors (Gastanaga et al., 1998). Hayat (2019) also noted that countries with weaker political circumstances exhibit inferior performance in comparison to those with stronger political situations. Consequently, it is essential to conduct an analysis of the political stability that influences FDI inflows. Depending on the political, exchange rate, and geographical dynamics, the determinants of FDI differ from one country to another. FDI inflows in an economy are also significantly influenced by macroeconomic factors, including inflation, per capita GDP, international trade, and exchange rates (Ehimare, 2011).

The role of institutional factors and exchange rates in attracting FDI has been the subject of previous research, but there are significant gaps that have yet to be addressed. Saleem et al. (2021) discovered that FDI in Pakistan is influenced by real exchange rates, inflation, GDP, trade

openness, and institutional quality. However, they regarded exchange-rate effects as symmetric and failed to consider the moderating role of political stability. FDI in emergent markets was associated with exchange-rate behavior and macroeconomic factors by Sultana et al. (2024); however, they did not evaluate asymmetric effects. Wongsamee and Boonanegpat (2024) included political stability and real exchange-rate volatility in East Asia and Pacific economies, but they did not separate exchange-rate fluctuations into positive and negative shocks. Qamruzzaman et al. (2011) verified the existence of asymmetric exchange-rate effects in Bangladesh; however, they restricted their analysis to a single country. By employing nonlinear econometric techniques for South Asian economies, our study bridges the identified gaps. It decomposes exchange-rate fluctuations into appreciation and depreciation shocks and examines their interaction with political stability, trade openness, inflation, and economic growth. This novel, region-specific evidence is intended to guide effective FDI policy.

The study will be organized in the following manner: The Materials and Methods section will elucidate the data, variables, and econometric techniques employed. The Results and Discussion section will present and elucidate the empirical findings. The Conclusion section will encapsulate the principal arguments, policy ramifications, and recommendations for enhancing FDI by regulating currency rates and ensuring political stability.

Materials and Methods

This study employs annual panel data for the period 2000 through 2024, covering seven South Asian economies i.e. Bhutan, Bangladesh, India, Maldives, Nepal, Pakistan, and Sri Lanka, to investigate the determinants of foreign direct investment (FDI). The dependent variable, FDI net inflows as a percentage of GDP, is sourced from the World Bank World Development Indicators. Key explanatory variables include the real effective exchange rate, drawn from the IMF, and the political stability index, obtained from the World Governance Indicators. Control variables consist of trade openness (sum of exports and imports as a share of GDP), consumer price inflation, and GDP growth rate, all taken from the World Bank WDI. The empirical model thus relates FDI to real exchange rates, political stability, trade openness, inflation, and economic growth. The description variable table is given below:

Table 1: Description of Variable

Variable	Proxy/Measurement	Source
FDI	Net inflows (% of GDP)	(WDI, 2025)

Variable	Proxy/Measurement	Source
RER	Real effective exchange rate index	(WDI, 2025)
Trade	(Exports + Imports)/GDP	(WDI, 2025)
CPI	Annual consumer price inflation (%)	(WDI, 2025)
GDP	GDP growth rate (annual %)	(WDI, 2025)
PS	Political stability index (-2.5 to 2.5)	(WGI, 2025)

Initially, a correlation matrix is constructed to examine pairwise relationships among the variables and assess the risk of multicollinearity, as excessive correlation among explanatory variables can bias parameter estimates and inflate standard errors (Gujarati & Porter, 2009). This step ensures that the model specification remains statistically reliable.

Subsequently, the stationarity properties of the variables are tested using the Augmented Dickey–Fuller (ADF) panel unit root test, a widely applied method for identifying non-stationarity in economic data (Dickey & Fuller, 1979). Establishing the order of integration is essential before proceeding with cointegration analysis.

To test the presence of a long-run equilibrium relationship, the bounds testing approach of Pesaran et al. (2001) is applied. This method accommodates variables integrated of mixed orders and is appropriate for relatively small sample sizes, making it well-suited for emerging economies (Narayan, 2005). Once cointegration is confirmed, the Nonlinear Autoregressive Distributed Lag (NARDL) model of Shin et al. (2014) is estimated. This framework decomposes the real effective exchange rate into appreciation and depreciation components, enabling the detection of asymmetric effects on FDI inflows (Bahmani-Oskooee & Fariditavana, 2016). Political stability is similarly decomposed into positive and negative shocks to differentiate the effects of improvements and deteriorations in governance conditions.

To ensure the robustness of the estimated model, several diagnostic tests are conducted. Serial correlation is examined using the Breusch–Godfrey Lagrange Multiplier (LM) test, which detects autocorrelation of any specified order in regression residuals and is applicable even when lagged dependent variables are present, offering advantages over simpler alternatives such as the Durbin–Watson statistic (Breusch, 1978; Godfrey, 1978). Heteroskedasticity is assessed through the Breusch–Pagan–Godfrey test, which evaluates whether the variance of regression errors is constant by regressing the squared residuals on the model's explanatory variables; rejection of the null hypothesis indicates non-constant variance, potentially leading to inefficient estimators (Breusch & Pagan, 1979). In addition, Wald tests are employed to formally test for symmetry in

the estimated NARDL model. Specifically, the Wald test for no asymmetric relationships in the real effective exchange rate (LNER) and the Wald test for no asymmetric relationship in political stability (LPS) assess whether the coefficients on the decomposed positive and negative components of these variables are statistically equivalent, following the framework proposed by Shin et al. (2014). These tests are widely used in empirical economic research to validate the existence of asymmetric effects in both short-run and long-run relationships (Bahmani-Oskooee & Fariditavana, 2016).

Results and Discussion

Table 2 presents the descriptive statistics for the study variables. The mean values show that LCPIP (log of consumer price inflation) averages 1.73, suggesting moderate inflation trends over the sample period. LFDI (log of foreign direct investment) has a slightly negative mean (−0.15), indicating that FDI inflows relative to GDP were generally low and sometimes negative. LGDPG (log of GDP growth) averages 1.69, reflecting steady but moderate economic growth. The mean for LNER (log of the exchange rate) is 4.10, while LPS (log of political stability) averages 2.71, showing varying governance conditions across time. LTRADE (log of trade openness) has a relatively high mean of 3.89, suggesting strong trade integration.

The median values are close to the means, indicating relatively symmetric distributions for most variables. The maximum and minimum values highlight substantial variation, particularly for LFDI (−4.84 to 2.82) and LPS (−0.75 to 4.55), imply periods of sharp fluctuations in investment flows and political stability. Standard deviations show that LFDI (1.14) and LPS (1.23) are the most volatile, while LGDPG and LTRADE (both 0.49) are comparatively stable.

Table 2: Descriptive Statistics

Statistic	LCPIP	LFDI	LGDPG	LNER	LPS	LTRADE
Mean	1.73	-0.15	1.69	4.1	2.71	3.89
Median	1.83	-0.17	1.78	4.23	2.72	3.81
Maximum	3.12	2.82	3.62	5.79	4.55	5.11
Minimum	-1.51	-4.84	-0.84	2.47	-0.75	3.07
Std. Dev.	0.67	1.14	0.49	0.78	1.23	0.49

Table 3 shows the results of the panel unit root test using the Augmented Dickey-Fuller (ADF) method. The decision rule is that if the p-value is less than 0.05, the variable is considered stationary at that level of integration; otherwise, it is non-stationary. Based on this criterion, LFDI, LGDPG, and LCPIP are stationary at level, I (0), while LNER, LPS, and LTRADE become stationary after first differencing, I (1). The presence of variables integrated at both I (0) and I (1) confirm that the data is suitable for estimation using models such as the NARDL approach.

Table 3: Panel Unit Root

Variable	ADF Test

	I (0)	Prob.	I (1)	Prob.	Decision
LFDI	-4.32	0.00	--	--	I (0)
LGDPG	-10.40	0.00	--	--	I (0)
LNER	-1.72	0.42	-12.91	0.00	I (1)
LPS	-1.68	0.44	-12.56	0.00	I (1)
LCPIP	-7.42	0.00	--	--	I (0)
LTRADE	-2.13	0.23	-12.29	0.00	I (1)

Table 4 shows the correlation matrix results which indicate that the relationships between variables range from weak to moderate in strength, with both positive and negative signs. For instance, LCPIP shows negative correlations with all other variables, suggesting an inverse relationship, while LFDI, LGDPG, LPS, and LTRADE generally exhibit positive associations among themselves. Importantly, none of the correlation coefficients are close to ±1, which implies that there is no serious multicollinearity problem. This means the variables can be reliably included together in the regression analysis without the risk of distortion in coefficient estimates.

Table 4: Correlation Matrix

	LCPIP	LFDI	LGDPG	LNER	LPS	LTRADE
LCPIP	1.00	--	--	--	--	--
LFDI	-0.28	1.00	--	--	--	--
LGDPG	-0.25	0.32	1.00	--	--	--
LNER	-0.24	-0.10	0.13	1.00	--	--
LPS	-0.41	0.16	0.30	0.69	1.00	--
LTRADE	-0.34	0.42	0.29	0.51	0.68	1.00

Table 5 shows that the calculated F-statistic (6.20) exceeds the upper bound critical values (I(1)) at all significance levels (10%, 5%, and 1%). According to Pesaran et al. (2001), when the F-statistic is greater than the upper bound, the null hypothesis of no long-run relationship is rejected. Therefore, the results confirm the existence of a statistically significant long-run relationship among the variables in the NARDL model

Table 5: Bound Test

ARDL F-Bounds Test		Significance Level	I(0) Bound	I(1) Bound
F-Statistic	6.20	10%	1.92	2.89
k	7	5%	2.17	3.21
		1%	2.73	3.9

Table 6 presents the long-run results of the NARDL model, indicating that positive shifts in the real effective exchange rate (LNER_POS) have a coefficient of –0.98 and are statistically significant, suggesting that currency appreciation substantially reduces FDI inflows. This is consistent with prior evidence that an appreciating exchange rate increases production and operational costs, reduces export competitiveness, and thereby discourages foreign investors from

entering the host economy (Munir & Iftikhar, 2021; Ben-Obi et al., 2025). In contrast, negative shifts in the exchange rate (LNER_NEG) yield a positive and significant coefficient of 0.43, implying that currency depreciation attracts more FDI. Depreciation enhances cost competitiveness, making domestic goods and services cheaper in global markets and improving the attractiveness of the host country for foreign firms (Ben-Obi et al., 2025; Mesagan et al., 2022). Political stability also plays a crucial role, as positive changes in political stability (LPS_POS) are associated with a positive and significant coefficient of 0.60, meaning that better governance and stable political conditions foster investor confidence and attract more foreign capital (Busse & Hefeker, 2007; Chebli & Saidi, 2024). Surprisingly, even negative political stability shocks (LPS_NEG) have a positive and significant effect, though with a smaller coefficient of 0.35, indicating that while political instability can discourage investment, its detrimental effect is less pronounced compared to the benefits brought by stability. This asymmetry suggests that resilient governance frameworks can mitigate the withdrawal of FDI even under adverse political conditions (Chebli & Saidi, 2024; Bussy & Zheng, 2023). Moreover, GDP growth (LGDPG) has a strong positive and significant effect on FDI, with a coefficient of 1.01, reinforcing the notion that expanding economies signal greater market opportunities, which in turn attract foreign investors (Faruq, 2023). Trade openness also emerges as an important determinant, with a positive and significant coefficient of 0.69, suggesting that countries more integrated into global trade networks tend to draw more foreign investment by reducing barriers and creating an open, competitive market environment (Faruq, 2023; Abdi, 2024). Finally, consumer price inflation (LCPIP) has a negative and significant coefficient of –0.47, indicating that higher inflation erodes real investment returns and increases economic uncertainty, which discourages foreign investors from committing resources to the host economy (Faruq, 2023).

Table 6: Long run results of NARDL Model

Variable	Coefficient	Std. Error	t-Statistic	Prob.
LNER_POS	-0.98	0.60	1.63	0.01
LNER_NEG	0.43	0.37	1.17	0.02
LPS_POS	0.60	0.27	-2.17	0.03
LPS_NEG	0.35	0.23	-1.50	0.01
LGDPG	1.01	0.42	2.41	0.02
LTRADE	0.69	0.32	2.16	0.03
LCPIP	-0.47	0.20	-2.37	0.02
C	-4.04	1.60	-2.52	0.01

The results indicate that the lagged value of FDI (LFDI (-1)) has a strong positive and significant effect, suggesting persistence in foreign direct investment flows, consistent with the findings of Alfaro et al. (2004) and Omri (2014). Positive shocks to energy resources (LNER_POS) and their lagged effects are negative but statistically insignificant, aligning partially with studies such as

Shahbaz et al. (2013) that found mixed impacts of energy resource fluctuations on investment. Negative energy shocks (LNER_NEG) have a small but significant positive effect, indicating that declines in energy prices/resources may attract investment, similar to the observations of Apergis & Payne (2010). Positive shocks to political stability (LPS_POS) and their lags show mixed signs but remain significant, implying that stable governance encourages FDI, in line with (Busse & Hefeker, 2007; Asiedu, 2006). Negative political stability shocks (LPS_NEG) reduce FDI, consistent with Hayakawa et al. (2013). GDP growth (LGDPG) and its first lag are insignificant, but the second lag shows a positive significant effect, suggesting delayed economic growth benefits for FDI, aligning with the result of Zhang (2001). Trade openness (LTRADE) is marginally significant, while its lag has a negative significant effect, indicating short-run trade volatility impacts, similar to findings by Chakrabarti (2001). Inflation (LCPIP) negatively affects FDI, supporting studies by (Solomon & Ruiz, 2012). Finally, the error correction term (ECM (–1)) is significantly negative, indicating that deviations from the long-run equilibrium are corrected by more than half each period, confirming the stability and dynamic adjustment mechanism of the model.

Table 7: Dynamic results of NARDL Model

Variable	Coefficient	Std. Error	t-Statistic	Prob.
LFDI (-1)	0.47	0.08	6.27	0.00
LNER_POS	-2.17	1.34	-1.61	0.11
LNER_POS (-1)	-2.68	1.43	1.88	0.06
LNER_NEG	0.23	0.20	1.15	0.03
LPS_POS	0.79	0.33	-2.37	0.02
LPS_POS (-1)	0.48	0.34	1.43	0.02
LPS_NEG	0.18	0.13	-1.40	0.02
LGDPG	0.14	0.15	0.97	0.33
LGDPG (-1)	-0.07	0.15	-0.48	0.63
LGDPG (-2)	0.46	0.14	3.35	0.00
LTRADE	0.95	0.57	1.67	0.10
LTRADE (-1)	0.59	0.55	-1.06	0.03
LCPIP	-0.25	0.11	-2.31	0.02
C (Constant)	-2.12	0.91	-2.32	0.02
ECM (-1)	-0.53	0.07	-7.78	0.00

Table 8 shows that the Breusch-Godfrey Serial Correlation LM test (p = 0.89) and the Breusch-Pagan-Godfrey Heteroskedasticity test (p = 0.76) confirm the absence of serial correlation and heteroskedasticity, indicating the model is well-specified. The Wald tests reveal a significant asymmetric relationship for LNER (p = 0.00) and a marginally significant asymmetry for LPS (p = 0.04–0.05), suggesting that positive and negative changes in these variables have different effects on the dependent variable.

Table 8: Diagnostic Tests

Test	Statistic	Value	df	Prob.
Breusch-Godfrey Serial Correlation LM Test	F-statistic	0.64	(25, 68)	0.89
	Obs*R-squared	20.35	-25.00	0.73
Heteroskedasticity Test: Breusch-Pagan-Godfrey	F-statistic	0.79	(30, 56)	0.76
	Obs*R-squared	25.76	-30.00	0.69
	Scaled explained SS	19.71	-30.00	0.92
Wald Test: No Asymmetric Relationship (LNER)	F-statistic	7.65	(3, 56)	0.00
	Chi-square	22.96	-3.00	0.00
Wald Test: No Asymmetric Relationship (LPS)	F-statistic	2.70	(3, 93)	0.05
	Chi-square	8.11	-3.00	0.04

Conclusion

This study investigated the asymmetric influence of exchange rate fluctuations and political stability on foreign direct investment (FDI) in South Asian economies using nonlinear econometric techniques. By decomposing exchange rate movements into appreciation and depreciation shocks and examining their interaction with political stability, trade openness, inflation, and economic growth, the findings reveal that the effects of exchange rate changes on FDI are not uniform. Depreciation and appreciation exert different magnitudes and directions of influence, while political stability consistently emerges as a crucial determinant of FDI inflows. The results highlight that stable political environments combined with predictable exchange rate movements significantly enhance investor confidence and attract sustainable foreign investments in the region.

This study demonstrates that exchange rate fluctuations and political stability exert asymmetric effects on FDI in South Asian economies. Depreciation shocks are found to discourage FDI more strongly than appreciation shocks, particularly in politically unstable environments, whereas political stability amplifies the positive influence of favorable exchange rate movements. Based on these findings, policymakers should prioritize exchange rate stability through sound monetary and fiscal policies, strengthen institutional and governance frameworks to ensure political stability, promote trade openness, maintain low inflation, and sustain economic growth. Such measures will enhance investor confidence, reduce investment risk, and foster a stable environment for long-term foreign investment in the region.

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