Ethnic and Religious Tensions as Determinant of Exchange Rate: A South Asian Perspective

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Abstract

This study investigates the impact of ethnic, religious, and socioeconomic conditions on the exchange rate in selected South Asian countries. The specific factors have a positive and negative effect on the exchange rates of the projected countries. The data nature is a panel; the period is 1984–2017. The econometric technique of the cross-sectional auto-regression distributed lag model (CS-ARDL) was used. Ethnic tension, religious tension, socioeconomic conditions, law and order, and political stability significantly influence exchange rate. Ethnic and religious tensions have negative impacts on exchange rate. As well, law & order and political stability have a positive effect on the exchange rate in the context of Pakistan. The study suggests that the projected nations focus on long-term policies, invest in social and economic development, enhance their legal systems and political reforms, and mitigate short-term risk and conflict.

Keywords: Religious Tension, Conflicts, Government Stability, Macroeconomic Factors.

Introduction

The developing countries are facing several social, economic, and political issues. Someone significantly impacts the financial activities of the nation. Religion is also a significant element that determines the lives of a country. It unites the people of a nation. Besides, it split the people of those nations. Religious and ethnic tension and socioeconomic conditions are essential factors that significantly impact any region's economic stability and growth. In Asian economies, these factors have a distinct influence on exchange rates (Hamadani et al., 2020; Hou, 2019). Religious tension can have positive and negative impacts on economic activities. Here are some ways religious tension can affect economic activities, such as reduced investment, disruption of trade, tourism decline, labor market impact, and reduced productivity. Therefore, increased government spending is needed to maintain peace and reduce this issue and influence on consumer behavior, education, social cohesion, and trust. Socioeconomic conditions, encompassing income inequality, poverty rates, education levels, and labor market dynamics, have also been recognized as influential factors in exchange rate movements. High levels of income inequality and poverty signal economic instability, potentially affecting investor perceptions and exchange rate trends. Studies on India, for instance, have explored how socioeconomic disparities across states contribute to differential exchange rate behaviors, reflecting the impact of regional economic variations (Kumar & Prasad, 2013).

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Additionally, the demographic challenges faced by economies like Japan due to aging populations have been shown to influence exchange rates, as changing labor dynamics and consumption patterns affect economic fundamentals (IMF, 2019). The diversity within Asian countries often exceeds ethnic and cultural lines, leading to ethnic tension that cast shadows on their economic prospects. The study of the impact of ethnic tension on exchange rate has highlighted the role of political instability and social conflict as determinants of currency volatility. Ethnic tensions stemming from historical, cultural, or political factors can create an environment of uncertainty that affects investor confidence and international trade relationships. For example, studies on Sri Lanka have noted how protracted ethnic conflict between the Sinhalese and Tamil communities contributed to exchange rate fluctuations as foreign investors became wary of the country's political stability (Stewart-Brown et al., 2015). Similarly, research on Southeast Asian nations, such as Thailand, has emphasized how political disturbances resulting from ethnic tensions can lead to fluctuations in the national currency (Nesadurai, 2008).

Religious Tension, Ethnic and Socioeconomic in South Asia

Religious tension in Asia is a complex and multifaceted issue due to the continent's rich diversity of religious traditions and cultures. Asia is home to some of the world's major religions, including Islam, Hinduism, Buddhism, Christianity, Sikhism, and various indigenous belief systems. Tensions can arise for various reasons, including historical conflicts, social and political factors, economic disparities, and cultural differences. Now, describe some significant examples of religious tension in different parts of Asia.

Religious issues in India

The South Asian giant, India, boasts incredible diversity across its states and regions, leading to various degrees of ethnic and cultural tensions. These tensions can intersect with socioeconomic conditions, potentially impacting the Indian rupee's exchange rate. The complex interplay between ethnic diversity, economic inequality, and political dynamics complicates India's exchange rate fluctuations (Kumar & Prasad, 2013).

India has a history of religious tension, particularly between Hindus and Muslims. Communal violence and disputes over religious sites have periodically erupted. In recent years, there have also been concerns about growing religious intolerance and discrimination, including violence against religious minorities, such as Christians and Muslims. There have been several riots, violence, and accidents in the last four decades, such as Gujarat communal riots (1969), anti-Sikh riots (1984), anti-Hindu violence (1998, 2002, 2006), anti-Muslim violence (6 December 1992), Gujarat riots (2002), Delhi riots (2020), and anti-Christian violence (Jahangir & Mehmood, 2022; Jacob & Kanth, 2023).

Figure 1 Communal Violence in India 2005-2017
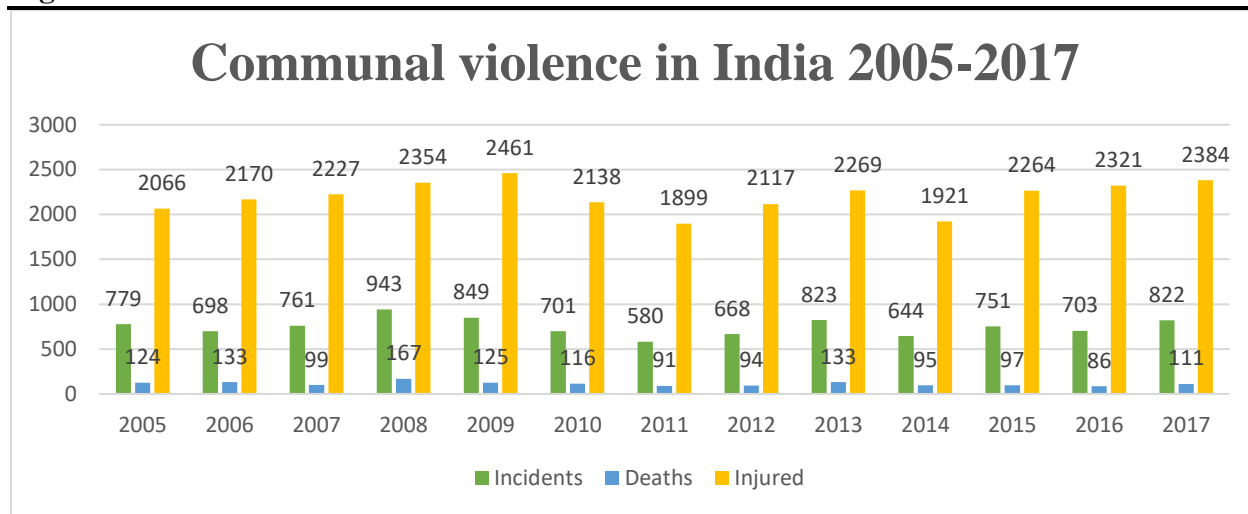
Source: Communal violence (World Development Indicator).

Religious Issues in Pakistan

Religious tensions in Pakistan often revolve around the country's Muslim-majority status. There have been conflicts between Sunni and Shia Muslims and attacks on religious minorities like Christians, Hindus, and Ahmadis. According to the Centre for Social Justice (CSJ) and the National Nongovernmental Organisation (NGO), in 2020, a total of 199 people were accused of blasphemy, while in 2021, 84 people were accused of blasphemy (Mehfooz, 2021). A Pakistani human rights group, the Centre for Social Justice, claims that between 1987 and February 2021, at least 1,855 individuals were accused of violating the country's blasphemy laws. There have been several riots, violence, and accidents since 1970. The language violence in Sindh (1972), Karachi riots (1972), Pakistan riots (2007), Karachi riots (2010), Ghotki riots (2019), anti-Ahmadiyya riots (1974), Lahore riots (1953), and Tahreek-e-Labbaik protests (2021) Pakistan faced several acts of mass violence in 1947, there were Bihar anti-Muslim riots, the Rawalpindi massacre, and the August anarchy. Therefore, the Bengali ethno-nationalist movement and the East Pakistan civil war in 1971, as well as the Crescent Just Mills massacre, Baluch is a major ethnic group, and the ethnonationalist movement of Baluch existed from 1948 to 2007. Parallelly, Sindhi is also a major ethnic group. The Sindhis-Muhajirs Language riots (1971–1972), Hyderabad massacre (1988), Pakka Qila massacre (1990), and Pathans-Muhajirs riots (1985–86) are the major accidents. In 1986, Karachi riots and a six-day insurgency (1994) destroyed Sindh's peace and economic activities. Religious violence in Pakistan has been a recurring and concerning issue, with various incidents targeting religious minorities and even different sects within Islam. The anti-Ahmadi movement and riot, the Punjab disturbances (1953), and the Rabwah incident (1974) also disturbed economic activities. Sectarianism destroyed the economic activities of developing countries, including Pakistan. In Pakistan, many accidents occurred, such as the Gilgit and Mominpura Graveyard Massacre (1988) and the Bari Imam Shrine Blast in 2005 (Baixas, 2008).

Religious Issue in Sri Lanka

Sri Lanka has experienced several riots and incidents of communal violence throughout its history, often fueled by ethnic and religious tensions. Sri Lanka's history of communal violence is rooted in complex ethnic and religious tensions, including divisions between the Sinhalese, Tamil, and

Muslim communities. The country has seen episodes of violence and discrimination, including anti-Muslim riots and terrorist attacks by extremist groups. Some significant accidents occurred at different times, like anti-Tamil riots (1965, 1985, 1977, 1985), Black July riots (1983), post-war communal violence (2009), Aluthgama riots (2014), and anti-Muslim violence (2014, 2018, 2019) (Hafeez, 2008). For instance, the ethnic trouble in Sri Lanka between the Sinhalese majority and the Tamil minority has historically posed challenges to the nation's social cohesion and economic progress. This tension, intertwined with socioeconomic disparities, can potentially disrupt trade relations and impact the stability of the Sri Lankan rupee (Samaraweera, 2015).

Objective
The primary objective of this study is to analyze how ethnic tension and socioeconomic conditions interact to mitigate the exchange rate of South Asian economies. Specifically, the study aims to:
1. To investigate the extent to which religious tension impacts exchange rate volatility.
2. To explore how socioeconomic conditions, including income inequality, poverty rates, and education levels, correlate with exchange rate fluctuations.
3. To examine whether ethnic tension and socioeconomic factors jointly amplify or mitigate the exchange rate effects

This study aims to fill a gap in the existing research by conducting theoretical and empirical studies on the relationship between violence, riots, religious and social tensions, and their impact on exchange rates. Previous studies have examined these variables separately, but there has yet to be a comprehensive investigation that combines them to understand their collective influence on exchange rates, particularly in a specific region. This study tries to investigate this gap by exploring the interconnection of these factors and their effects on regional exchange rates.

Literature review
The literature examines the relationship between ethnic tension and exchange rates in South Asian economies. Various studies have investigated the influence of socioeconomic conditions on exchange rates in Asian economies. Kumar and Prasad (2013) studied the impact of income inequality and regional economic disparities on exchange rate behavior in India. Therefore, Samaraweera (2015) studied the role of ethnic conflicts in Sri Lanka and their impact on the exchange rate. These conflicts create uncertainty, decrease investor confidence, and disrupt trade relationships. Thus, impacting the value of the local currency, the outcomes show that ethnic tension significantly impacts exchange rate volatility.
Chowdhury et al. (2021) and Iqbal et al. (2022) studied the socioeconomic conditions and currency values in Asian states. These studies tried to integrate the intricate interplay between ethnic diversity and socioeconomic conditions in shaping exchange rates. By exploring the nexus between these factors, studies shed light on how social inclusion policies and equitable economic strategies can stabilize exchange rates (Jia & Xie, 2022; Kim & Lee, 2021). These studies also highlighted the potential of holistic approaches to examine ethnic tension and socioeconomic disparities in exchange rate analysis. The combined impact of ethnic tension and socioeconomic conditions on exchange rates remains relatively limited and promising.
Silalahi and Wijaya (2020) studied how ethnic tensions can exacerbate the influence of socioeconomic factors, contributing to exchange rate volatility in Indonesia. However, a panel data approach used and considering both variables holistically is mainly preoccupied. Initial studies suggest that ethnic conflicts and political instability in regions like Myanmar and Xinjiang can disrupt trade relations and deter foreign investments, consequently impacting exchange rate

volatility (Chatterjee & Chatterjee, 2022; Xu & Yan, 2021). The combination of ethnic tension and socioeconomic factors in exchange rate analysis is a growing area of interest in current literature. The study suggests that the combined effect of ethnic tension and unfavorable socioeconomic conditions can lead to amplified exchange rate volatility (Alam & Oo, 2022; Hu & Zhang, 2020). However, there remains a notable gap in comprehensive cross-country analyses that delve into how these variables influence exchange rates in today's Asian economies. Modern literature underlines the intricate relationship between socioeconomic conditions and exchange rates in Asian economies. Recent studies have explored how widening income inequality, exacerbated by the COVID-19 pandemic, can influence investor sentiment and economic fundamentals, ultimately affecting currency values (Nguyen et al., 2020; Suardi et al., 2022). Moreover, the impact of education levels and labor market shifts on exchange rates is gaining attention, shedding light on the evolving landscape of Asian economies' currency behaviors. Recent studies have used dynamic models to explore the combined impact of ethnic tension and socioeconomic conditions on exchange rates. In that study, systems thinking and an agent-based model were used to recognize the nonlinear relationships between ethnic tension, socioeconomic variables, and currency fluctuations (Zhao et al., 2023; Li et al., 2022).

Methodology
Although several ethnic, religious, and socioeconomic tensions and conditions are responsible for reducing the exchange rate, growth, and development, they also disturb economic activities. Socioeconomic conditions have a significant impact on exchange rates. Exchange rate is influenced by a wide range of economic and social factors, and socioeconomic conditions are a crucial part of this specific equation. Therefore, exchange rate is determined by a multifaceted set of variables, and ethnic tension is just one of many factors that can influence investor perceptions and market dynamics. Moreover, the specific impact of ethnic tension on exchange rates can vary widely depending on the severity of the tension, the country's economic fundamentals, and the international geopolitical milieu. Empirical models are valuable tools for examining and understanding the relationships between different variables. They are used to analytically test theories or hypotheses, quantify the impact of various factors, and provide meaning to multiple social, economic, and political phenomena. The exchange rate is a dependent variable, and ethnic and religious tension, socioeconomic conditions, law and order, and political and government stability are independent variables.

Data Sources
This study examines the association between ethnic and religious tension and its impact on the exchange rate. The exchange rate is a dependent variable, while other variables are independent. The data nature is panel and region South Asia countries Pakistan, India, Sri Lanka, Nepal, and Bangladesh. The period is 1984–2017. The data are from the World Development Indicator (WDI) and the International Country Risk Guide (ICRG).

$$EXR_{it} = f (\text{Ethnic Tension, Religious Tension, Socio-economic Conditions, Law and Order, Government Stability, Political Stability})$$

Econometric model
The mathematical model describes that the association between ethnic tension, religious tension, and socioeconomic conditions impacts the exchange rate. Some variables, such as law and order,

government stability, and political stability, influence Pakistan's exchange rate. Strong political and government stability, as well as law and order, improve economic activities, which positively impact the exchange rate of a projected state. Besides, religious and ethnic tensions adversely affect every aspect of the state, distorting direct and indirect exchange rates.

$$LNEXRit = a_{it} + \beta_1 ET_{it} + \beta_2 RT_{it} + \beta_3 SEC_{it} + \beta_4 LO_{it} + \beta_5 GS_{it} + \beta_6 PS_{it} + \varepsilon_{it} \ldots (1)$$

Where EXRit refers to the log of the exchange rate, ETit, Rtit, and SECit show ethnic and religious tension and socioeconomic conditions, respectively. Loit indicates law and order, and GSit and PSit represent government and political stability. It is an error term. α are parameters, and α shows the intercept and coefficients to be estimated.

Descriptive Statistics
Descriptive statistics are a set of techniques and measures used to summarize and describe the critical features of a dataset. These statistics provide a concise overview of the dataset. Researchers and analysts understand the dataset before diving into more complex analyses. A dataset's primary and fundamental features are studied in descriptive statistics (mean, median, and mode), as well as variance, kurtosis, and skewness (Gul et al., 2023; Gul et al., 2020).

Panel Unit
Before checking the cointegration approach, it is necessary to check the order of integration of each variable. The LLC study was introduced by Levin and Lin (1993), Levin et al. (1993), and Breitung (2000), while IPS was developed by Im, Pesaran, and Shin (IPS) for panel data. It created heterogeneity in the autoregressive coefficient among variables. The IPS panel unit root test is a powerful and less restrictive tool for determining the integration order of variables in panel data analysis.

$$\Delta Y_{it} = \delta_{it} + \beta_i + \sum \gamma_{ij} \Delta y_{i,t-j} + \varepsilon_{it}; i = 1,2,3 \ldots, N, t = 1,2,3,\ldots T \ldots (2)$$

In the specific model, Yit represents each variable under consideration, δit is used for individual fixed effects, and γi represents the uncorrelated residuals over time. The null hypothesis (H0) being tested is that = 0 for all i, meaning that there is no time-related correlation in the residuals for all individuals. In contrast, the alternative hypothesis (HA) suggests that < 0 for i in the range 1 to N1 and = 0 for i in the range N1+1 to N. It means that for the first N1 individuals, there is a negative correlation in the residuals over time, while for the remaining individuals (from N1+1 to N), there is no such correlation. This test helps determine whether there is a time-related pattern in the residuals for specific groups of individuals within the specific data. The IPS statistic is calculated by taking the average of individual ADF statistics across the units in a panel dataset. It serves as a tool to measure the existence of unit roots in a panel and to explain the possibility of heterogeneity among the individual units. The formula for the IPS statistic is as follows:

$$\bar{t} = \frac{1}{N} \sum_{i=1}^{N} t_{iT}, \quad \ldots (3)$$

$\bar{t}$ is the panel unit root test statistic, N, the total number of units or entities in the panel dataset, and i, the individual ADF statistic for each unit i. is the ADF t-statistic for the country as in equation (1). The statistic used in statistical testing is known to follow a normal distribution when specific values are provided for sample size (N) and degrees of freedom (T). These critical values for the statistic can be found in the work of Im et al. (2003). It indicates the conditions under which the t

statistic can be appropriately applied in statistical analysis. The first-generation panel unit root tests, including IPS tests, assume that cross-sections are independent.

Cointegration

Panel cointegration tests, similar to panel unit root tests, suggest high statistical power compared to traditional time series cointegration tests. In this study, the Pedroni test is used to determine a long-term relationship among the specific variables. Pedroni developed a set of multiple tests designed to measure the H0 of no cointegration in panel data and investigate the heterogeneity among the units within the panel data. The Pedroni cointegration test can be divided into average test statistics and piecewise averages. These tests use a regression model to investigate the presence of a long-term relationship among the variables (Pedroni, 1999).

$$Y_{it}=a_{it}+\vartheta_{it}+\beta_1 x_{1,it}+\beta_2 x_{2,it}+\ldots\beta_{ki} x_{kit}+\varepsilon_{it};t=1,2,3\ldots,T,\ i=1,2,3,\ldots k\ldots(4)$$

Both variables Y and X are assumed to have an integration order of 1, i.e., "I (1)," indicating first-order integration. The parameters ait and ϑit represent the individual entity (cross-sectional) and time effects, respectively, in the analysis, and they can be set to zero if required. Pedroni employed various cointegration statistics to investigate the presence of cointegration in the study, which include Panel v-statistics, Panel ρ-Statistics, Panel t-statistics (non-parametric), Panel t-statistics (parametric), Group ρ-statistics, Group t-Statistics (non-parametric), and Group Statistics (parametric). In conclusion, Pedroni utilized a range of cointegration statistics to assess whether long-term relationships exist among the variables within the panel dataset. These statistics are categorized into within-panel and between-group tests, and they consider both individual entity and time effects in the analysis (Lau & Baharumshah, 2006).

Results and Discussion

Table 1 Cross-sectional Dependency (CD) Test

Tests	$LNEXR_{it}$	ET_{it}	RT_{it}	SEC_{it}	LO_{it}	GS_{it}	PS_{it}
	Variables						
BP-LM	8072.5 *	6751.6*	15751.*	61.043*	6378.9*	9003.9*	772.04 *
PS-LM	154.68*	125.64*	323.45*	178.06*	186.78*	270.12*	50.482*
BCS-LM	153.76*	124.72*	322.53*	177.42*	186.14*	269.84*	50.202*
P-CD	22.762*	25.765*	86.674*	37.075*	31.696*	79.427*	2.3315*

* Indicate at 1% significant level.

The results of 1 describe the CD test. It suggests that there is significant cross-sectional dependency among the variables LNEXRit, ETit, RTit, SECit, LOit, GSit, and PSit, based on the given test statistics. The significance of cross-sectional dependency may vary slightly depending on the specific test used, but all tests indicate a significant level of dependency among these variables.

Table 2 Descriptive Statistics

	$LNEXR_{it}$	ET_{it}	RT_{it}	SEC_{it}	LO_{it}	GS_{it}	PS_{it}
Mean	5.697386	11.69352	5.288160	5.632675	3.203194	6.919956	-1.827049
Median	5.818544	11.79286	5.157286	5.500000	3.256901	6.750000	-1.764551
Maximum	6.391917	12.19975	17.37416	6.916667	3.408866	10.83333	-0.777436
Minimum	4.727388	10.98573	-5.745136	4.250000	1.103007	2.166667	-2.810035
Std. Dev.	0.441192	0.358440	3.994986	0.696601	0.355268	2.116213	0.588744
Jarque-Bera	2.510078	2.022441	9.202371	2.055335	1657.519	0.972657	2.056811
Probability	0.285065	0.363775	0.050040	0.357841	0.073497	0.614880	0.357577

Descriptive statistics are a set of techniques and measurement approaches to use in statistics to summaries and describe the main structures of a dataset. These provide a method to understand and communicate essential information about the data without investigating complex statistical analyses. The maximum value is 1.37, while the minimum value is -2.81. The standard deviation is a significant method to explain the variation of data from the center (mean). In table 2, the standard deviation of all variables is the minimum, which refers to the data around the mean. Similarly, the projected variables are normally distributed because the p-value of JB is higher than 0.05.

Table 3 Lag Selection Criteria

Lag	LogL	LR	FPE	AIC	SC	HQ
0	-19431.60	NA	4.904533	4694347	46.96056	46.95002
1	13686.40	114.54533	4.704354	33.88543*	33.15632	32.11142*
2	13591.74	187.7269	3.824345	32.88101	33.00070*	32.92692
3	13572.38*	38.24685*	3.754887	32.85600	33.02697	32.92157

* Refers select lag criteria.

Selecting the appropriate lag length in time series analysis is essential to building accurate and parsimonious models. Various criteria and methods determine the suitable lag length for autoregressive (AR), moving average (MA), or ARIMA models. The Akaike Information Criterion (AIC) is commonly used for selecting the lag order in time series modeling. AIC is a statistical measure used for model selection that balances model goodness-of-fit. In this study, we also selected the AIC criteria.

Table 4 Panel Unit Root Tests

Variable		At Level		At 1st Difference		Out-comes
		II***	II & T**	II***	II & T**	
LN EXR$_{it}$	**LL & C**	-3.50 (0.00) *	-4.22 (0.00) *	-10.3 (0.00)*	-6.7 (0.00)*	LLC I (0)
	IPS	-3.50 (0.36)	-0.12 (0.45)	-14.0 (0.00)*	-12.5 (0.00)*	IPS I (1)
ET$_{it}$	**LL & C**	-2.93 (0.00)*	-2.28 (0.01)*	-10.6 (0.00)*	-7.83 (0.00)*	LLC I (0)
	IPS	-1.28 (0.09)***	1.27 (0.89)	-14.6 (0.00)*	-13.6 (0.00)*	IPS I (1)
RT$_{it}$	**LL & C**	-2.90 (0.00)*	0.05 (0.52)	-12.3 (0.00)*	-10.8 (0.00)*	LLC I (0)
	IPS	1.54 (0.93)	0.14 (0.55)	-13.1 (0.00)*	-10.3 (0.00)*	IPS I (1)
SEC$_{it}$	**LL & C**	1.52 (0.93)	-2.95 (0.00)*	-4.91 (0.00)*	-2.07 (0.00)*	LLC I (0)
	IPS	3.61 (0.99)	0.78 (0.78)	-9.62 (0.00)*	-8.70 (0.00)*	IPS I (1)
LO$_{it}$	**LL & C**	-1.52(0.06)***	-4.01 (0.00)*	-9.08 (0.00)*	-6.40 (0.00)*	LLC I (0)
	IPS	2.-07 (0.98)	-1.5 (0.05)***	-11.9 (0.00)*	-9.40 (0.00)*	IPS I (1)
GS$_{it}$	**LL & C**	9.02 (1.00)	-2.32 (0.01)*	-4.19 (0.00)*	-1.87 (0.03)*	LLC I (0)
	IPS	11.5 (1.00)	1.05 (0.85)	-5.13 (0.00)*	-4.59 (0.00)*	IPS I (1)
PS$_{it}$	**LL & C**	-.07 (0.00)*	-8.18 (0.00)*	-5.45 (0.00)*	-2.29 (0.01)*	LLC I (0)
	IPS	-3.30 (0.00)*	-5.09 (0.00)*	-9.20 (0.00)*	-6.28 (0.00)*	IPS I (0)

II* II& T** represent individual intercept and intercept and trend respectively.

Panel unit root tests, such as the LLC (Levin et al.) and IPS (Im et al.) tests, are statistical methods used to determine whether a set of panel data series is stationary or non-stationary. Stationarity is a fundamental concept in time series analysis, and it is crucial for many econometric analyses, including panel data models. Stationarity is essential in time series analysis because non-stationary data can lead to spurious regression results and unreliable statistical inferences. Several tests, such as LLC, IPS, Maddala and Wu, and ADF panel tests, are used in panel data. This study used the LLC and IPS panel unit root tests. In the case of LLC, all variables are stationary at level. Similarly, in IPS, all variables are stationary at the first difference except PSit, which is stationary at level. When all variables are stationary in mixed order, then use ARDL. Besides, if we check the positive and negative scores, we use the NARDL approach.

Table 5 Pedroni Cointegration test

Tests	II	II & IT
P-v-S	0.355 (0.361)	-2.224 (0.9869)
P-rho-S	-2.251 (0.012) *	-1.080 (1.40)
P-PP-S	-3.993 (0.000) *	-5.380 (0.000) *
P-ADF-S	-2.524 (0.005) ***	-3.143 (0.000) *
G-rho-S	-1.441 (0.774)	-0.626 (0.265)
G-PP-S	-5.004 (0.000) *	-7.760 (0.000) *
G-ADF-S	-1.915 (0.027) **	-2.210 (0.013) *

In this table, P, G and S indicate panel, group and statistic. Therefore, II and IT shows individual intercept and trend respectively.

Cointegration is a statistical concept related to the long-term equilibrium relationship between two or more than two time series variables that are non-stationary or integrated. In this study, Table 5 presents the results of the Pedroni cointegration analysis. The findings from this analysis indicate

robust evidence of cointegration among the variables for both scenarios, "II and II and IT." It suggests a stable, long-term relationship among these variables, which could be essential for understanding their interactions and dynamics over time.

Table 6 CA-ARDL Results

Short-Run Est. Mean Group		Long-Run Est.	
Variable	**Coefficient [SD]**	**Variable**	**Coefficient [SD]**
Cons	-1.29 [1.38]	Lr_Cons	5.66 [0.14] *
ET	-0.39 [0.19] ***	Lr_ET	-0.05 [0.01] *
RT	-0.01 [0.00] **	Lr_RT	-0.18 [0.07] **
SEC	-0.08 [0.02] *	Lr_SEC	-0.12 [0.02] *
LO	0.01 [0.01]	Lr_LO	0.02 [0.06]
GS	-0.01 [0.00] ***	Lr_GS	-1.11 [0.60]
PS	-0.70 [0.26] *	Lr_PS	0.12 [0.04] **
Adjust Term		-	-
Mena Group	**-0.57 [0.027] *****	-	-
No. of obs.	4,420	CD-statistics	43.15
Prob. F	0.0000	P-value	0.0000
R^2	0.34	R^2 (MG)	0.57

Table 6 presents both short and long-run results of CA-ARDL analyses. In the Panel short-run (part a), the statistically significant ECM coefficient of -0.57 indicates the adjustment towards long-run equilibrium, implying short-run convergence to long-run equilibrium. The short-run result of CA-ARDL is significant primarily, implying that the short-run variation of independent variables affects our dependent variables. The long-run results of CA-ARDL analysis provide various perspectives on the relationship between variables over time and across units. The long-run effects focus on equilibrium or steady-state relationships. In part (b), table 6 describes the CA-ARDL results. An increase of ethnic tension by 1 unit decreased the exchange rate by -0.05 percent in the long run.

Religious tension is also included in the deterministic approach to determining the exchange rate. When religious tension increases, the exchange rate declines by 0.18 units in the long term. The socioeconomic conditions determine the economic and social value of a state. It significantly impacts the exchange rate—the exchange rate declines by -0.12 units with an increase of 1 unit in the long run. Law and order are necessary for every aspect of a nation. Solid and proper law and order increase the exchange rate directly and indirectly. However, law and order do not influence the exchange rate in Pakistan. The political stability is also directly correlated with the exchange rate everywhere. The political stability increases by 1 unit, besides the exchange rate increasing by 0.12 units in the long run.

To conclude, these factors collectively influence a nation's exchange rate, reflecting the interplay of social, political, and economic dynamics. In summary, the short and long-run CA-ARDL results highlight the intricate relationship between various factors and exchange rates. Ethnic tension, religious tension, socioeconomic conditions, law and order, and government and political stability all play significant roles in influencing exchange rates. These findings underscore the importance of considering a range of socioeconomic and political factors when analyzing exchange rate dynamics and their potential impacts on economies.

Conclusion

This study investigates the impact of ethnic, religious, and socioeconomic conditions on the exchange rate in selected South Asian countries. The specific factors positively and negatively impact the projected countries' exchange rate. The long-run panel data analysis reveals a complex relationship between various factors and exchange rate. Ethnic tension, religious tension, socioeconomic conditions, law and order, government stability, and political stability significantly influence exchange rate. Ethnic and religious tension increase and tend to decrease exchange rate. Socioeconomic conditions and law and order have negative impacts on exchange rate.

Furthermore, government and political stability result in substantial increases in exchange rate. These findings underscore the importance of considering a comprehensive set of socioeconomic and political factors when examining exchange rate dynamics and their potential impacts on economies. The study suggests that the states focus on long-term policies, invest in social and economic development, enhance the legal systems and political reforms, and mitigate short-term risk and conflict. There is also dire need to improve religious education and facilitate ethnic groups for sustainable societal development.

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