

Impact of Key Macroeconomic Variables on Exchange Rate under Political Instability: Evidence from A GMM Analysis in Sri Lanka

Macroeconomic
Variables

K. N. Thabrew
Independent Researcher

C. Liyanagamage
*Department of Accounting and Finance,
Faculty of Management Studies,
The Open University of Sri Lanka
bdcha@ou.ac.lk*

Received 02 October 2025
Revised 23 November 2025
Accepted 01 February 2026
Published (Online) 20 February 2026

Abstract

While there have been many explorations on the determining factors of foreign exchange rates, hardly any literature has been carried out to explore the moderating role of political stability in these relationships. This study explores the most influential macroeconomic drivers of the foreign exchange rate in Sri Lanka explicitly examining the role of political stability in the macro fundamentals-exchange rate nexus. Employing monthly data of foreign reserves, workers' remittances, trade deficit and tourism earnings from 2013–2022 and applying Generalized Method of Moments (GMM), the study tests the exchange rate dynamics within a crisis economy context. The findings show that foreign reserves, workers' remittances, and trade deficit are good predictors of foreign exchange rate in the short run, whereas the tourism earnings has no statistically significant impact in the Sri Lankan context. Further, findings reveal that political stability directly affects the exchange rate, and more interestingly, moderating the effects of other macro variables on exchange rate, by reducing the pass-through from foreign reserves, strengthening the effect of remittances, and buffering the effect of trade deficit in the short term. These findings highlight the significance of structural imbalances and institutional fragility in determining exchange rates behaviour in emerging economies in ways that are less common in stable economies. In conclusion, conducive macro environment together with credible political governance helps strengthen the currency. From policy perspective, the efforts contributing to institutional credibility, external financing strategy, remittance channels, and minimizing temporary foreign reserves accumulation are suggestive.

Keywords: Exchange rate, macroeconomic variables, political stability, Sri Lanka

© K. N. Thabrew & C. Liyanagamage. Published in *Sri Lanka Journal of Management Studies*. Published by the Faculty of Management Studies of the Open University of Sri Lanka. This article is published under the Creative Commons Attribution-Share Alike 4.0 International (CC BY-SA 4.0). The full terms of this licence may be found at <https://creativecommons.org/licenses/by-sa/4.0/>.

SLJMS 

Sri Lanka Journal of Management
Studies
Vol. 7 – Issue II, 2025
pp, 210 – 232
ISSN (Print): 2682-7298
ISSN (Online): 2792-1093

<https://doi.org/10.4038/sljms.v7i2.194>

Introduction

The determinants of exchange rates differ from country to country, highlighting disparities in their economic environment and degree of market openness. For emerging economies such as Sri Lanka, which are highly involved in global trade and finance activities, exchange rates significantly affect their economy's resiliency. Exchange rates of the Sri Lankan Rupee (LKR) to U.S. Dollars (USD) have been consistently declining during past few years with random fluctuations, but minimal recoveries each time. As global economies trend towards increased interconnectivity, the consequences of such depreciations have far-reaching effects in disrupting the resilience of the economy highlighting the need to explore the forces that go behind exchange rate instability, (Bouraoui & Phisutthiwatcharavong, 2015).

The exchange rate in a foreign exchange market refers to the value of a nation's currency relative to other currencies. Exchange rate theory assumes particular significance in situations involving international trade in any nation. In understanding the economy wide effects of exchange rates from a macroeconomic theory viewpoint, several aspects come into play. These aspects include facilitating capital/saving movements across economies, bridging resource gaps in any economy, and encouraging investments. The economy wide effects related to exchange rate variability in any economy take place via two main processes. These processes occur via appreciation, whereby the domestic currency appreciates; as such, prices associated with imports decrease while national debt may fall. The second process relates to devaluation of the economy's currency; in this case, the costs rise (Wimalasuriya, 2007; Ormaechea, 2020).

The depreciation of exchange rate value affects various activities related to economy such as wages, interest rate, and prices. For instance, in March 2022, Sri Lanka experienced a sharp fall in the value of its currency. The reasons behind these were identified as fall in the nation's foreign reserves, remittances, and increase in trade deficits among other factors. The monetary policy of Sri Lanka has always been involved in maintaining exchange rates and controlling inflation. The exchange rate from 1950 to 1977 remained fixed by CBSL and remained pegged to the British pound and then to the USD to control inflation related to the pegged currency. However, it resulted in exchange rate insensitiveness to export performance generating perpetual balance of payment problems in Sri Lanka culminating into dual exchange rate policy (Rajakaruna, 2017).

The collapse of the Bretton Woods system in Sri Lanka in the 1970s implemented a floating exchange rate. Nevertheless, CBSL makes intermittent interventions to ensure stabilization of the Sri Lankan Rupee during economic recession. During recent economic crisis situations, Sri Lanka chose to allow their Rupee to free float; later it adopted controlled floating to mitigate further depreciation and large trade deficits. The current economic crisis situation in Sri Lanka, accelerating from the presence of 'COVID-19 Pandemics,' depict increased prices of essential commodities. Further deterioration of their foreign exchange reserves coupled with increasing public disturbances can be attributed to perceived 'fiscal irresponsibility'(Gayathri et al, 2024). Historically, any economical deficit in Sri Lanka would be compensated by export-oriented services such as garments production, the tourism sector, and foreign remittances. All these major contributing services were drastically hampered by COVID-19 Pandemics. The Sri Lankan Govt had to borrow high-rate foreign loans. Adding to their 'debt burden'(Rajakaruna, 2017).

The efforts by CBSL to attract foreign exchange revenues, subsequent reduction of import dependence in the economy unfortunately promoted remittance from informal channels in Year 2021.

Empirical research shows that there are universally accepted effects of macroeconomic variables such as inflation, interest rates, and balance of trade on exchange rate behavior. For example, authors such as Dornbusch (1976) and Frankel (1979) developed models highlighting the effect of inflation and interest rates in determining exchange rates. More contemporary empirical research has reaffirmed this, and work by Bahmani-Oskooee and Saha (2015) and Hansi (2023) have investigated the impacts that inflation and interest rate differentials have on exchange rates and the way that economic fundamentals are the center of exchange rate determination. However, while these empirical contributions are solid in their foundation, the possible impact of a stable political conditions kept silent, and this in turn limits their validity in politically volatile settings. Political instability, which can be measured in terms of policy uncertainty, government changes, or civil unrest, is now also widely accepted as a critical source of movements in exchange rates.

Chen et al (2020) analyze the impact of uncertainty of economic policy on exchange rate volatility in China and show that volatilities of exchange rates are positively and significantly impacted by policy uncertainties. The specific concern of this study however is economic policy uncertainty rather than political instability though the two concepts interrelated. More specific impact of political instability on exchange rates in five Arabian countries was examined in the study of Bouraoui & Hammami (2017) concluded that, political instability causes substantial drop in the value of domestic currencies in these countries. By taking the most important political events into their analysis, a Youness (2022) observed that unstable political environment has a direct effect on the exchange rate in Lebanon. These studies bring forth political instability as an exchange rate determinant; however, in most instances, they do not examine its role as a moderator alongside the macroeconomic indicator.

While political instability is known to be important, it is not usually tested as a moderating effect on the interaction between exchange rate movements and macroeconomic variables. From a policy perspective, the lack of knowledge on the moderation effects of political instability on exchange rate limits the stabilization policies in politically unstable economies. Findings such as Rodrik (2000) are in the view that political risks must be considered by economic policy. The policy interventions remain incomplete until these risks interactions with macroeconomy are better understood. This underscores the need of investigating this moderating role, to offer more refined policy framework specifically to economies suffering both macroeconomic and political instabilities.

Therefore, the key objective of the present study is to examine the moderating role of political instability on the effect of macroeconomic indicators; foreign reserves, workers' remittance, tourism earnings, and trade deficit on exchange rate. More specifically, this study provides a comparative analysis over periods with different levels of political stability, in the context of another emerging economy, Sri Lanka. Hence, the present study seeks to provide new insights into enhancing stabilization policies particularly in politically unstable economies by investigating the role of political instability in the nexus between macroeconomic variables and

exchange rates. More specifically the present study first attempts to identify theoretically, and empirically significant determinants of foreign exchange rate can be more applicable to Sri Lanka. Then, study seeks to investigate the moderating role of political stability in exchange rate determination.

Literature Review and Hypotheses Development

The exchange rate, or the relative price of one currency in terms of another, is at the heart of international trade and financial integration (Chowdhury & Hossain, 2014). Historically, nations employed fixed exchange rate systems under the Bretton Woods system, but its collapse in 1973 created the environment for floating and hybrid systems. The choice of an exchange rate regime is decided by both structural and institutional factors. Early studies on exchange rate determinants concentrated on economic size, openness, and financial development (e.g. Aliyev, 2014), and fiscal discipline and inflation control (e.g. Ghosh, 2011). More recent contributions place greater weight on the institutional dimension. Among them Dincer et al (2019) shows that central bank independence and fiscal transparency makes floating regimes more durable, stressing how credibility strengthens the effect of fundamentals.

Most of the empirical studies on determinants of exchange rate behavior concentrated on emerging economies. For example, in Pakistan, Saeed et al. (2012) found money supply and debt to be major drivers, whereas foreign reserves softened volatility. Support this finding Chowdhury & Hossain (2014) also find that inflation, GDP growth, and current account balances as major exchange rate determinants in Bangladesh. Some studies such as, Ali et al. (2022) by using Malaysia data explore that interest rates affect real effective exchange rate volatility in the short run and GDP deflators, inflation and exports affect in the long run. More recent empirical evidence, however, suggests that the relationship between exchange rates and macro variables is conditional, becoming significant only in certain contexts or when interacting with additional variables. For instance, findings of Khan et al. (2025) support GDP growth-exchange rates nexus, however, argue exists only in association with capital account openness. Similarly, Okot , (2022) also provide evidence for the influence of balance of trade, export concentration, and export prices on exchange rate determination, and highlighted that this relationship changes with interest rate differentials, global financial conditions, and short-term capital flows.

The literature on exchange rate determinants of Sri Lanka relatively scares and diverse. Among them, the impact of trade balances and capital flows on exchange rate volatility has been tested (Wimalasuriya, 2007; Alawattage, 2009). A subsequent study by Rajakaruna (2017), using data from 2000 to 2010 reveals that nominal exchange rate is affected by inflation, call money rates, government interventions, imports, balance of trade, and remittances. However, these findings on exchange rate determination have been concentrated on specific variables rather than composite models. Reinhart and Rogoff (2004) argued that more accurate classifications can be attained with multivariate approaches, and Akram et al., (2020) Djalo et al., (2023) further confirm the superiority of using multiple determinants econometric approaches such as structural VARs and dynamic ARDLs. This methodological advancement entails that for emerging open economies like Sri Lanka, exchange rate dynamics are typically best explained by considering both domestic macro level fundamentals and external shocks together.

Theoretical underpinning on determinants of exchange rate, such as purchasing power parity theory, interest rate parity theory, and balance of payments approaches provide useful but incomplete interpretations in some instances. Rather, they provide general interpretations, despite observed empirical evidence of frequent short-term deviations such as speculative flows, capital mobility, and behavioral influences. Obstfeld and Rogoff (2000) underlined that as theoretical model explain, neither macro fundamentals nor speculations alone determine exchange rate volatility, but the interaction of both. This was further reinforced in more recent behavioral perspectives such as Chahrour et al. (2021), reveal that ordinary macro-fundamental models do not closely link in reality highlighting the importance of viewing these realities dynamically to detent the need of real adjustments.

Among individual determinants, foreign reserves emerge as common in determining exchange rates. Evidence from India, China, Nigeria, and Pakistan (Romero, 2005; Saeed et al., 2012) confirms that higher reserves smoothen volatility. Aizenman et al. (2021) also proves that reserve accumulation in post-crisis Asia acts as insurance against sudden stops in capital flows. Shrestha (2016) also establish that reserves in South Asia buffer depreciation pressure during external shocks, reaffirming their central role in exchange rate management. Remittances are another major determinant of foreign exchange for developing economies. Remittances can strengthen exchange rates as they are non-debt foreign exchange inflows. This argument has been affirmed in studies conducted in Pakistan, Nepal and Sri Lanka providing evidence of long-run appreciation effects (Khan et al., 2016; Rajakaruna, 2017; Essayyad et al., 2018). However, Barajas et al. (2011) had earlier argued that remittances affect exchange rates through consumption and investment channels as remittances are countercyclical. More recent studies (Hassan & Shakur, 2017) add that the appreciation effect is stronger in countries with less developed financial markets, where remittances serve as a substitute for local credit, and therefore cause greater upward pressure on the currency.

Balance of payments dynamics also significantly affect exchange rate movements. Zhang and MacDonald (2014) disclosed the contribution of net foreign assets and trade balances. More recent studies affirmed this and further reveal that effect of trade balance on exchange rate intensified with global value chain participation (Georgiadis et al., 2020). Moreover, this negative impact of continuing trade deficits on currency stability in emerging markets was also established in Mohamud & Mohamud (2025). Similarly, the effect of FDI and foreign borrowing is complex. As Mirchandani (2013) highlights FDI can strengthen currencies as they are currency inflows. However, Kumar et al. (2019) highlight the depreciation pressures that would be created through excessive foreign indebtedness. According to Djalo et al. (2023) unless productively invested, debt management and repayment inefficiency can erode currency stability.

Tourism is also increasingly recognized as a stabilizing foreign exchange earner, particularly in South Asia. Adeleye et al. (2022) stress tourism's effect on currency appreciation, and UNWTO (2021) its role in post-COVID recovery for emerging markets.

The Elasticities Approach to Exchange Rates also explains that increased foreign demand for tourist services increases the relative price competitiveness of the domestic economy, which tightens the domestic currency. Supporting this theoretical relationship in Sub-Saharan Africa Tung & Thang (2022) states exchange rate significantly appreciate with tourism earnings.

Political uncertainty would enhance how exchange rates response to inflation, interest rate, or balance of trade changes. Findings of Baker et al., (2020) indicate a moderating effect of policy and political uncertainty on exchange rate volatility in their study by supporting the argument that volatility in financial markets is uplifted with such uncertainties. Eichengreen et al. (1995) shows that economic and political environments can affect exchange rate behaviour and hence highlights the significance of further studies. In a more recent study, Youness (2022) confirm the exacerbating impact on exchange rate dynamics through political instability and macroeconomic uncertainty. When an economy is politically stable, it ensures that there is stability in economic policies and lower risks that result in greater investor confidence and lower exchange rate volatility. Political uncertainties increase economic risks, thus by hampering exchange rate volatility (McCloud et al., 2021). Further research efforts by Bush & Noria (2021) state that political risks worsened exchange rate volatility in response to economic distress, particularly in emerging economies. These findings underscore the existence of definite gap in empirical research related to how exchange rates are stabilized in different countries.

In conclusion, literature provides mixed results. Hence, traditional macroeconomic variables like reserves, inflation, trade deficit, remittance earnings, fiscal policy, and interest rate continue to play a determinative role in analyzing exchange rate behavior and exchange rate volatility but moderated by institutional and governance quality and stability. Notably, the role behavioral and structural differences also featured in relatively newer literature assessing how exchange rate behavior derives not from mere fundamental values but from strengthened global capital mobility as well as investor behavior facilitating exchange rate performance. It suggests that exchange rate determinants for small economies like Sri Lanka have not been sufficiently addressed. Rather, it involves comprehensive models encompassing classical exchange rate determinants, institutional determinants and external events. So, the development of research away from simple single-variable investigations and towards complex multivariate specifications mirrors an understanding that is more general: exchange rate determination is complex and needs specifications that account for the interaction between domestic fundamentals, international linkages, and institutional capability.

Tourism has always been an important foreign currency earner for Sri Lanka, contributing 14% of foreign exchange income from 2014 to 2019. Since 2019, both tourism earnings and worker's remittances have experienced very large declines, together with foreign reserves which have the potential to destabilize exchange rates. While deeply tied to economic growth, the effect of these macro fundamentals on exchange rates is yet under-researched. Assuming foreign reserves, worker remittance, tourism income and trade deficit are widely accepted and discussed in Sri Lanka for stabilizing exchange rates during periods of instability, the study developed the following hypotheses to identify their role in determining foreign exchange rates.

H1: Increases in foreign reserves lead to significant changes in the foreign exchange rate.

H2: Increases in worker remittance exert a significant impact on the changes in foreign exchange rate.

H3: Widening trade deficit exert a significant impact on the changes in foreign exchange rate.

H4: Increases in tourism earnings lead to significant changes in the foreign exchange rate.

H5: Political Stability significantly affects the movements in the foreign exchange rate.

Political stability is hypothesized as follows to moderate the interrelationships among independent variables identified above and exchange rate.

H6a: Political stability moderates the impact of foreign reserves on the foreign exchange rate.

H6b: Political stability moderates the impact of worker's remittances on the foreign exchange rate.

H6c: Political stability moderates the impact of trade deficit on the foreign exchange rate.

H6d: Political stability moderates the impact of tourism earnings on the foreign exchange rate.

The aim of the study here is to analyze determinants of exchange rate in Sri Lanka specially focusing on selected macroeconomic determinants and the moderating role of political stability. The result is expected to contribute to the resolution of Sri Lanka's ongoing economic crisis as well as the broader academic literature on exchange rate determinants. The hypotheses are an organized manner of stating these relations and offer a framework for empirical testing in the Sri Lankan economy.

Methodology

This study employs an empirical analysis of the complex interactions of foreign exchange rates with some key economic and political contributing factor; foreign reserves, tourism receipts, workers' remittances, trade deficit, and political stability. By presenting these determinants to a comprehensive analysis, this study aims to explore the complex web of influences on foreign exchange rates and to establish the policy implications.

Thus, the study applies a positivist philosophy, and empirical, objective research with quantitative data. It is deductive in the sense that it starts with economic theories or hypotheses of exchange rate movement. By using historical time series data and employing econometric analysis, the study pursues to test and confirm the theories and attempting to fit observed patterns to theoretical expectations, thus having a confirmatory research design.

The Econometric Model

To determine the relationship between the identified independent variables and the exchange rate, the baseline econometric model presented in Equation 1 was formed.

$$\begin{aligned} \text{Foreign Ex. Rate} = & \beta_0 + \beta_1 \text{foreign reserves} + \beta_2 \text{worker's remittance} + \\ & \beta_3 \text{Trade deficit} + \beta_4 \text{earnings from tourism} + \\ & \beta_5 \text{Political Stability} + e \end{aligned} \quad 01$$

To test the moderation effect of political stability, an interaction term (independent variable x moderator variable) was introduced for each independent variable separately and added to Equation 1 to form the final estimation model. The statistical significance of the interaction term will be used to assess the impact of political stability on the relationship between foreign exchange rate and the determinants identified above. The extended econometric model in its simplified form is presented Equation 1A.

$$\begin{aligned} FER_t = & \beta_0 + \beta_1 FR_t + \beta_2 WR_t + \beta_3 TD_t + \beta_4 ET_t + \beta_5 PS_t + \beta_6 FR_t * PS_t + \beta_7 WR_t \\ & * PS_t + \beta_8 TD_t * PS_t + \beta_9 ET_t * PS_t + \beta_{10} FER_{t-1} + e_t \end{aligned} \quad 1A$$

The analysis utilizes time series data from 2013 to 2022. Monthly average USD/LKR exchange rate and corresponding monthly statistics for foreign reserves, remittance, trade deficit and tourism receipts were utilized for the analysis. Hence, the sample includes all the available points for this specific timeframe, totaling 120 observations. This full set of data for ten years is the basis for analysis and drawing conclusions in relation to foreign exchange rates and the associated economic variables.

To attain uniformity and comparability, all the variables have been logarithmically transformed. Transformation normalizes the scale of different units so that analysis becomes more consistent and the interpretation of the results of the model becomes stronger. It also eliminates any likely biases associated with differences in scale among the variables. The approach enables an overall assessment of the relationships and quantifies the impacts of these economic indicators on the USD/LKR exchange rate over the provided 10-year time period. Although there may be nonlinear dynamics in the exchange rate due to structural changes or asymmetric responses, the study assumes a linear model. As the central objective of the study is to establish the moderating effect of political stability between the selected macro variables and the exchange rate, using linear model allows for an easily interpretable interaction terms and baseline model on the theoretical context with which the study is concerned.

Generalized Method of Moments (GMM) is used in estimating the dynamic impact of exchange rate changes on selected macroeconomic variables, while testing the moderating role of political stability. The GMM was selected due to the possible endogeneity occurring with reverse causality and measurement errors of which the model structure inherently involved, and dynamic nature of foreign exchange rate in the model. Ordinary Least Squares method leads to biased estimations in such a model, whereas GMM estimations are unbiased, with the use of internal instruments. These internal instruments are embedded in the lag structure in the data itself.

The set of instrument variables includes lagged values for all the independent variables. Accordingly, foreign reserves and balance of trade were treated as clearly endogenous since it responds contemporaneously to policy and exchange rate changes and hence used deeper lags (-2), (-3). Worker's remittance and Earnings from tourism were treated as somewhat exogenous as

they react with shorter lag structure. This is aligned with macroeconomic theory, which suggests that adjustments are determined by their previous values, yet these are not correlated with error terms. Inclusion of lagged instruments alleviates simultaneity problems between foreign exchange rate changes and macroeconomic indicators, while Heteroskedasticity and Autocorrelation Consistent (HAC) standard error correction handles problems in serial correlations typically present in time series data. Lagged dependent variable was included to capture the persistence in exchange rate dynamics whereas political stability was included as an exogenous instrument.

Data and Measurement

Data was collected using secondary sources, the central bank monthly reports and reading the available timely news. The dependent variable of the study is foreign exchange rate, i.e. the value of one Sri Lankan Rupee in comparison to the value of the United States Dollar. It was proxied as the monthly average USD/LKR rate. Among the independent variables, foreign reserves represent the foreign assets that are easily accessible to and under the control of the monetary authorities and worker's remittance is the portion that migrant workers send home is referred to as a foreign remittance. The trade deficit is defined in this study as the disparity in economic value over a specified duration between a nation's inbound and outbound transactions involving goods and services. The variable Earnings from tourism refer to the income a country generates from visitors' spending on accommodation, activities, and goods within its borders. All these four variables are measured in USD millions per month. The data related to political stability of the country has been collected through the available timely news and estimated as a dummy variable. A state characterized by turbulent or uncertain political situations, such as wars, governance changes, or government transitions were considered in deciding political stability. 24 such negative political events were identified during the sample period (Appendix 1). A particular month the event occurs were assigned to the value 1 and others with 0.

There were difficulties encountered in the collection of data, mainly matching variables to a common measurement period since some were monthly while others were quarterly. This involved excluding some variables that were initially planned. The variables also had different units of measurement, which needed to be standardized prior to analysis. Though exchange rates changed daily, the researcher utilized monthly rates to match with other variables for the sake of consistency and comparability throughout the dataset. To operationalize political stability, the study made use of a dummy variable formed from the negative political events that occurred. However, the possible spill-over consequences of these events in subsequent months, which are hard to measure, are not considered. These limitations influenced the variable selection and approach of the study.

Findings and Discussions

To sustain the reliability of the time series analysis, all the variables were initially tested for stationarity. Stationarity testing is necessary to avoid spurious regression results and to ensure valid inferences are made in econometric modeling. The Augmented Dickey-Fuller (ADF) test was conducted to ascertain if there are unit roots in the monthly exchange rate, foreign reserves, remittances, trade deficit and tourism receipts series between 2013 and 2022 and presented in

Table 1. ADF test was conducted under two specifications ‘with intercept only’ and with ‘intercept and trend’ at both level and first difference.

Table 1. ADF Test for Unit Root

Variable	Level		First Difference	
	Intercept	Intercept and Trend	Intercept	Intercept and Trend
Foreign Exchange Rate	-0.9926	-0.9868	-6.4672***	-6.7287***
Foreign Reserves	-1.0004	-1.6076	-14.8259***	-14.8845***
Earnings-Tourism	-2.4186	-2.6563	-8.3038***	-8.2686***
Workers Remittance	-2.1067	-2.755	-15.644***	-15.5949***
Trade Deficit	-7.2679***	-7.2492***	-11.5219***	-11.4789***

Note: Lag lengths are automatic based on SIC MAXLAG=12. *** represents significant at 1% , and are based on MacKinnon (1996) one-sided p-values. The critical values are values given in the e-views output. The lag values are common to both test statistics with and without intercept.

As given in the above table the null hypothesis of a unit root cannot be rejected for all the variables except trade deficit in their level form as the test statistics are higher than critical value indicating none of the series except trade deficit are stationary at level form. However, at first difference ADF statistics become strongly negative for all the variables at the critical value of 1%. Hence, the null hypothesis of a unit root is rejected for all the variables in first difference under both specifications. These results justify the use of first differenced data and GMM estimation which is proposed for dynamic models with I(1) macroeconomic variables and possible endogeneity.

Time Series Pattern of Variables

The key objective of this study is to examine the determinants of foreign exchange rate in Sri Lanka with the evidence from a rich dataset covering economic and political data of number of years. Figure 1 below presents the behavior for each variable over the sample period 2013-2022.

These graphs show the time-series analysis of the variables of the study for the years 2013 to 2022. Foreign Exchange Rate shows a severe increasing trend starting after 2021, reflecting intense depreciation of the local currency, particularly in the more recent years of the period. This can be a sign of economic downturn such as high inflation or weakening foreign reserves. The time series pattern of foreign reserves reveals an unstable behavior but starts to drop sharply during 2019–2020, with a very sharp fall in post-2021. This may indicate a depletion of reserves, possibly as a result of economic crises or attempts at currency stabilization. Tourism earnings depict the peak level in mid-2018, and drastic decline thereafter. This may also be due to events such as the Easter attack and Covid pandemic, which have affected travel and tourism around the world and shows a slow recovery towards the end of the period. The trade deficit is observed to be highly volatile with a general upward trend. Peaks in 2020–2021 reflect fluctuating import-export trends, maybe due to variation in local production or overseas demand. Contrary to this, worker's remittances depict a steady growth, reaching the peaks in the later years. This may

probably due to growing numbers of migrant workers or perhaps due to the changes in global economic environments which affected remittance flows. Overall, the period from 2021 onwards shows a overall economic depression, evidenced by the weakening in foreign reserves, and the intensifying in the foreign exchange rate.

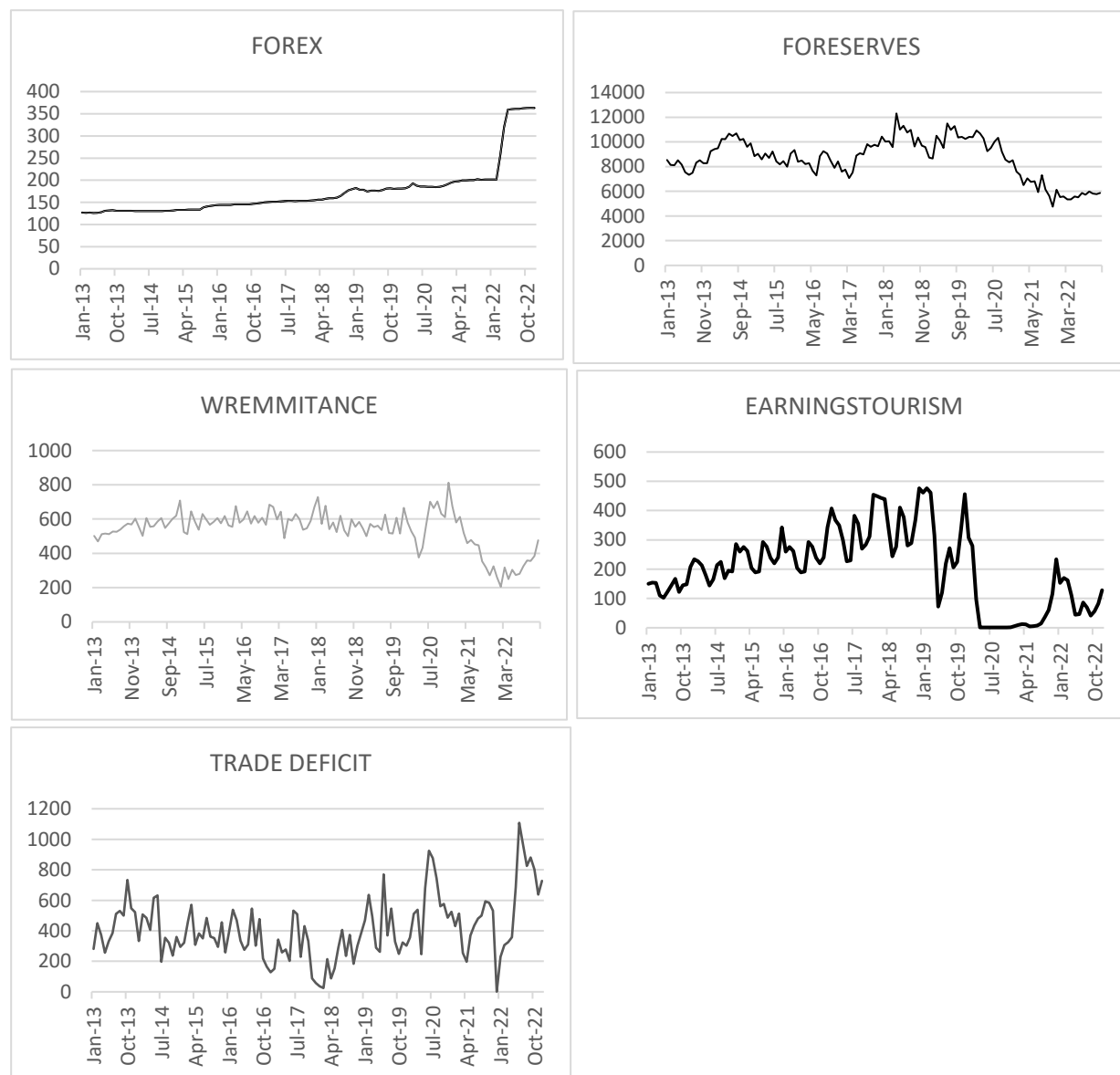


Figure 1. Time Series Behaviour of Variables

These graphs show the time-series analysis of the variables of the study for the years 2013 to 2022. Foreign Exchange Rate shows a severe increasing trend starting after 2021, reflecting intense depreciation of the local currency, particularly in the more recent years of the period. This can be a sign of economic downturn such as high inflation or weakening foreign reserves. The time series pattern of foreign reserves reveals an unstable behavior but starts to drop sharply during 2019–2020, with a very sharp fall in post-2021. This may indicate a depletion of reserves, possibly as a result of economic crises or attempts at currency stabilization. Tourism earnings depict the peak level in mid-2018, and drastic decline thereafter. This may also be due to events

such as the Easter attack and Covid pandemic, which have affected travel and tourism around the world and shows a slow recovery towards the end of the period. The trade deficit is observed to be highly volatile with a general upward trend. Peaks in 2020–2021 reflect fluctuating import-export trends, maybe due to variation in local production or overseas demand. Contrary to this, worker's remittances depict a steady growth, reaching the peaks in the later years. This may probably due to growing numbers of migrant workers or perhaps due to the changes in global economic environments which affected remittance flows. Overall, the period from 2021 onwards shows a overall economic depression, evidenced by the weakening in foreign reserves, and the intensifying in the foreign exchange rate.

Descriptive Statistics

Descriptive statistics are used to summarize and provide insights into the data and are presented in Table 2 below.

Table 2. Descriptive Statistics of the Variables

	Forex	Foreign Reserves	Earnings Tourism	Trade Deficit	Worker Remittance
Mean	174.17	8660.70	203.88	415.25	541.07
Median	153.74	8786.60	210.50	373.00	564.70
Maximum	363.40	12312.30	476.20	1108.00	812.70
Minimum	126.03	4757.20	1.00	1.00	204.90
Std. Dev.	58.19	1660.13	130.97	203.04	111.03
Skewness	2.28	-0.42	0.15	0.71	-0.98
Kurtosis	7.77	2.46	2.31	3.80	3.98
Observation	120	120	120	120	120

Source: Authors' computation

Descriptive statistics of the study variables presented in table 2 reveal significant volatility and economic distress during the sample period. The mean value of foreign exchange rate was 174.17 yet exposing a huge fluctuation from 126.03 to 363.39. Trade and investment in the country have been adversely affected by these fluctuations, implying a considerable instability in the currency. The positive skew and leptokurtic distribution too support these indicating periods of sharp depreciation and resulted economic instability. Average foreign reserves stood at 8660.70 million USD, with a maximum of 12312.30 million USD and minimum of 4757.20 million USD. Generally higher, but with long periods of decline is evidence through the negative skew symbolizing experience of vulnerability from external economic shocks.

Generally, tourism income is seasonally volatile. The mean of 203.88, and large standard deviation of 130.97 confirms these variations across the time horizon. The high irregularity ranges between 1.00 and 476.20 reveal not only the fluctuations in tourism revenues but also itself as an unstable income generator. This is particularly true as the tourism sector heavily depends on international and local influences. Trade deficit too depicts greater variations between wider and narrow deficits, despite the mean deficit of 415.25 million USD during the sample horizon. The positive skew indicates incidences of deficit imbalances, perhaps due to shocks in

global demand or supply disruptions. Similarly, the mean value of workers' remittances stood at 541.07 during the sample period with large fluctuations. The negative skew shows the periods of low inflows, highlighting the vulnerability of remittance-receiving families.

Collectively, these indicators are symbolized of an economy in disequilibrium, relying on externalities like remittances and tourism, and underscoring the need for stronger economic management to deliver stability.

Table 3. Multicollinearity Analysis

Variable	VIF
Foreign Reserves	2.03
Worker Remittance	1.95
Trade Deficit	1.10
Tourism Earnings	1.14

Source: Authors' computation

While multicollinearity does not render GMM estimation inappropriate, a diagnostic test for its presence was also run to determine the level of linear correlation among the explanatory variables based on their VIF statistics. According to the VIF values shown in table 3, all variables have values below 10, the standard cut-off level for potentially problematic multicollinearity for linear relationships among explanatory variables, and mostly range between 1 and 2. A further implication of this table is that while GMM itself is robust to high correlations among its explanatory components, presenting VIF ratios helps to establish that among the explanatory variables presented, inappropriate levels of collinearity do not exist among them.

Generalized Method of Moments (GMM) Estimation Results

This section shows and interprets the empirical findings derived from GMM estimation for equation 1A to establish how key macroeconomic determinants identified in this study influence foreign exchange rates while considering moderating effect of political stability. This equation combines both direct effect of foreign reserves, workers' remittances, trade deficits, earnings from tourism, as well as interaction terms among these macroeconomic fundamentals and the variable political stability for dynamic adjustment processes through lagged exchange rate terms. Having established the appropriateness employing GMM in the methodology section, this section aims interpreting the estimated coefficients, their statistical significance, and the overall validity of the instrument set. The results reported in table 4 reflect the short-run responses of the exchange rate dynamics to macroeconomic variables and the extent to which political stability strengthens or weakens these relationships.

Table 4. GMM Estimation Results

Variable	Coefficient	Std. Error	t-Statistic	Prob.
C	0.0474***	0.0179	2.6421	0.0095
Foreign Reserves	0.1443**	0.0603	2.2391	0.0186
Workers Remittance	-0.1353***	0.0398	-3.4029	0.0009
Earnings-Tourism	-0.002	0.0091	-0.2268	0.8210

Trade Deficit	-0.016**	0.0062	-2.5888	0.0110
Political Stability	-0.0421**	0.0207	-2.0345	0.0444
Foreign Reserves* Political Stability	-0.1343***	0.0395	-3.4006	0.0010
Workers Remittance*Political Stability	0.1925***	0.0567	3.3947	0.0010
Earnings-Tourism*Political Stability	0.0025	0.0027	0.9092	0.3653
Trade Deficit* Political Stability	0.0154**	0.0071	1.9988	0.0442
Forex(-1)	0.4358***	0.0532	8.1846	0.0000
R-squared	0.5127			
Adjusted R-squared	0.4662			
SE of regression	0.0103			
Durbin-Watson stst	1.6319			
Instrument rank	20			
J-statistic	6.9065			
Prob (J-statistic)	0.6468			

Note: The dependent variable is foreign exchange rate (Forex). All regressors are included in first differences except political stability. Estimation is conducted using GMM with HAC covariance (Newey–West) to correct for heteroskedasticity and serial correlation. The instrument set consists of lagged values of all endogenous regressors; instrument rank reflects the total number of valid instruments used. *** and ** indicate a significant difference from zero at 1%, and 5%, respectively.

The test results presented in table 4 are the GMM estimation to test the hypotheses developed in this study. This model illustrates the relationship between exchange rate, and the identified key macro variables. The study utilized a data set spanning from January 2013 to December 2022, with a total of 120 observations.

GMM estimation reveal several important observations on the exchange rate dynamics. The coefficients of independent variables provide information on the extent to which the foreign exchange rate is influenced by them. In GMM estimation all the variables are in first differences reflecting short run adjustments. Foreign Reserves has a coefficient of 0.1443, indicating that increase in foreign reserves is positively associated with the exchange rate, and this is statistically significant at 95% confidence level. Workers' Remittances have a coefficient of -0.1353, indicating that exchange rate will decline when there is a rise in remittances, and this impact is statistically significant at 99% confidence level. On the other hand, trade deficit has a negative coefficient of -0.016, meaning that foreign exchange rate is appreciated by an increase in trade deficit. This impact, although relatively small, is significant as the corresponding t-statistic is above 2. The impact of political stability is also significant at 5% level, with the coefficient value of -0.0421 indicating exchange rate appreciation with political stability. Hence hypotheses H1, H2, H3 and H5 are accepted. However, H4 is rejected as tourism earnings coefficient is negative (-0.002) and statistically insignificant.

In order to test the moderating effect of political stability on the relationship between foreign exchange rate and independent variables (foreign reserves, workers remittances, Trade deficit and tourism earnings), an interaction terms {(political stability $\times$ foreign reserves), (political stability $\times$ workers remittances), (political stability $\times$ trade deficit) and (political stability $\times$ tourism revenues)} were introduced into the model. It is interesting to note that all the

variables except tourism earnings have significant impact on exchange rate determination withing this moderation mechanism.

More importantly, the interaction terms of workers' remittance ($\beta = 0.1925$, $p < 0.01$), and trade deficit ($\beta = 0.0154$, $p < 0.05$) found as positive and statistically significant, suggesting that political stability buffers or offsets the negative impact of workers remittances and trade deficit on foreign exchange rates. Thus, the moderation hypothesis H6b and H6c is supported. The result highly supports a moderation role of political stability in the foreign reserves-exchange rate relationship. This effect is negative (-0.1343) proving that political stability weakens the positive impact of foreign reserves on exchange rates. Hence, H6a is supported. H6d is however rejected as the moderation with earnings from tourism remains insignificant in short run. This says despite the general acceptance, even under different levels of political stability the impact of tourism earnings on exchange rate is negligible.

The model fit statistics indicate that GMM has adequately specified its variables to capture short-run dynamics in the exchange rate differential. The R-Squared 0.5127, and Adjusted R-Squared 0.4662, indicate that about half of the variation can be explained by variables in the model for the dependent variable, which is about right for this particular model for a macroeconomic environment that handles monthly variables for differential models. The Standard Error of Regression is very low at 0.0103, which shows precision on overall fit. The Durbin-Watson Statistic for this model at 1.6319 is well within boundaries for comparable sample size and regressors for other models. This indicates that this model does not suffer from autocorrelation on the positive side but handles well for GMM estimation on error structure. Instrument rank is at 20, confirming that it has enough over-identification. The J Statistic for this model is 6.9065 with p-value at 0.6468, confirming that over-identified restrictions are valid, so this model has chosen valid regressors that are not correlated with error terms.

Discussion of Findings

The results obtained from this research are very useful for understanding how important macro variables, together with political stability, interact to create short-run exchange rate dynamics in Sri Lanka. The results of GMM specification above reveal how reserves, remittances, trade deficit, and political instability interact in line with its overall structural and institutional framework.

Foreign reserves reveal an significant impact on short-term exchange rate movements. This again highlights the important role played by reserves in shaping exchange rates. It has been hypothesized that increases in reserves enhance confidence against external risks by ensuring that countries are better able to repay their external obligations and promote market confidence in their economies (Aizenman & Lee, 2007). Conversely, for emerging countries, reserves are often accumulated as a consequence either of adverse market sentiment or costly policy interventions, as discussed in "fear of floating" literature and policy responses during the crisis (Calvo & Reinhart, 2002). This pattern is reflected in Sri Lanka's experience, where its central bank has accumulated reserves to manage the pressures of exchange rate depreciation during its crises periods. Such reactive behavior can therefore generate observed short-term associations between reserves and exchange rates contrary to the original hypotheses. Similar studies on reserves'

adequacy on emerging Asia also reveal that reserves tend to react more to stress rather than to non-stress situations for developing countries (Aizenman & Sun, 2012).

Workers' remittances exhibit a significant impact on exchange rates and work as a stabilizing flow of funds to the country. The stabilizing role played by remittances is in line with the absorption theory to exchange rates, where remittances are shown to decrease exchange rate uncertainty by injecting money into the economy and therefore reducing pressures to borrow money from abroad at costly rates (Barajas et al., 2011). For Sri Lanka, worker remittances are mainly countercyclical, meaning that when a country faces hard times, remittances tend to flow into the country and therefore support its exchange rate. This is also true for other countries around the world since remittances provide cover against shocks for countries operating in challenging environments (Ratha, 2013).

The trade balance contributes to shaping exchange rates. The direction of its impact imply that widening deficit trigger immediate adjustments within the economy, either via monetary policy, import compression policies, or market expectation adjustments. Such adjustments in the short run can reduce pressures of devaluation, even when structural imbalances are still present. This has links to structuralist explanations on how imbalances are managed within small countries exposed to global markets, where adjustments rather than imbalances exert stronger influences on short-run exchange rate arrangements, as cited in Krugman et al. (2018).

Political stability appears as an important determinant for both long run and short run exchange rate dynamics. The result showing that political stability has a positive effect on exchange rate stability or appreciation is consistent with research on political economy highlighting the importance of institutional factors for shaping certain macroeconomic variables or outcomes (Alesina et al., 1996; Feng, 2001). For Sri Lanka, political instability has repeatedly manifested in terms of situations like constitutional breakdowns, political instability, and change in policies, resulting in sharp exchange rate depreciation.

The moderating effects identified within the research add more meaning to how political stability affects macro variables. The result that political stability offsets the pass-through effect of foreign reserves on the exchange rate reveals a substitutive function for moderation, where, under high political trust, reserves are no longer as important for markets as they are for assurance purposes (Obstfeld et al, 2010). In situations where political stability is absent, reserves are seen to carry more weight in soothing markets, a widely observed phenomenon within emerging countries that struggle with non-credible institutions (Dominguez, 1998).

The relationship between remittances and political stability demonstrates an 'enhancing moderating' pattern. For example, where there is political stability, the stabilizing effect of remittances on currency stability is strengthened. Better governance and policy certainty improve remittance transmission to foreign exchange supplies, as individuals are assured to hold domestic money units as a result of improved governance and policy certainty (Ratha et al, 2016).

The tourist income results, both directly and interactively, indicate no significant short-run effect on exchange rates. This can well prove to be consistent with the heavily seasonal

nature of tourist arrival in Sri Lanka. External disturbances, including Easter attacks, pandemics, or global patterns, can generate turbulent tourist flow patterns, which are not sufficiently credible as exchange rate influencers on a monthly basis. It has also been identified that prior literature indicates no short-run implications for exchange rates but offers significant implications for long-run external balances on tourism income (Narayan et al., 2010). Lastly, the degree of persistence seen in exchange rates is also consistent with typical emerging markets' currencies. This can be attributed to structural rigidities, as well as adjustments, that exhibit persistence in exchange rates (Goldberg & Knetter, 1996). In general, the above results underline the importance of both economic fundamentals and political stability for exchange rates in Sri Lanka. They support that stronger institutional credibility can contribute substantially to alleviating reliance on costly external buffers, while also improving stabilizing factors related to remittances and external imbalances.

Conclusion

This study contributes to existing body of knowledge on exchange rate dynamics in Sri Lanka by exploring how the key variables in the macro economy are interact with political stability in shaping short-run exchange rate dynamics. The results have aligned well to and are supported by traditional theory such as the monetary approach of exchange rates, absorption approach to exchange rates, and political economy models, where credibility of institutions plays a critical role. The results have also brought to attention the points whereby the true situation experienced in Sri Lanka differs from traditional theory fundamentally being small in nature and classified as a small open economy. Some true deviations occur in relation to reserves impacted by instability in the economy, external receipts impacted by instability in the economy, and instability in economy is impacted by political environment.

Relates to policy conclusions, it suggests that it is necessary to improve key macro variable performance simultaneously with institutional stability. Political stability and improved governance can greatly improve the efficiency of external sector balances by ensuring lower risk-premium costs and pressures on the exchange rate. It is also important to ensure that external balances are derived from long-term sources rather than relying on short-term borrowing. Ensuring that remittance and export streams are conducive to stability can also limit risks. It is also essential to ensure that economic management practices are transparent and governed by rules to provide market confidence to improve exchange rate stability rather than relying on heavy intervention and costly reserves.

References

- Adeleye, B. N., Ogede, J. S., Rabbani, M. R., Adam, L. S., & Mazhar, M. (2022). Moderation analysis of exchange rate, tourism and economic growth in Asia. *PLOS ONE*, 17(12), e0278869. <https://doi.org/10.1371/journal.pone.0278869>
- Aizenman, J., & Lee, J. (2007). International reserves: Precautionary versus mercantilist views, theory and evidence. *Open Economies Review*, 18(2), 191–214.

- Aizenman, J., & Sun, Y. (2012). The financial crisis and sizable international reserves depletion: From fear of floating to the fear of losing international reserves? *International Review of Economics & Finance*, 24, 250–269. <https://doi.org/10.1016/j.iref.2012.03.002>
- Aizenman, J., Cheung, Y.-W., & Qian, X. (2021). International reserve management and firm investment in emerging market economies (NBER Working Paper No. 29303). National Bureau of Economic Research. <https://doi.org/10.3386/w29303>
- Alawattage, U. P. (2009). Exchange rate, competitiveness and balance of payment performance. *Staff Studies*, 35(1), 1–28.
- Alesina, A., Ozler, S., Roubini, N., & Swagel, P. (1996). Political instability and economic growth. *Journal of Economic Growth*, 1(2), 189–211. <https://doi.org/10.1007/BF00138862>
- Ali, M. F. M., Mohamad, S. F. S., Yusof, A. S. M., Ismail, S., & Ibrahim, N. A. (2022). A GARCH study on exchange rate determinants: A case of Malaysia. *Journal of Statistical Modeling & Analytics*, 4(1), 1–13.
- Aliyev, R. (2014). Determinants of the choice of exchange rate regime in resource-rich countries (CERGE-EI Working Paper No. 527).
- Bahmani-Oskooee, M., & Saha, S. (2015). On the relation between stock prices and exchange rates: A review article. *Journal of Economic Studies*, 42(4), 707–732. <https://doi.org/10.1108/JES-03-2014-0043>
- Baker, S. R., Bloom, N., Davis, S. J., & Terry, S. J. (2020). COVID-induced economic uncertainty (NBER Working Paper No. 26983). <https://doi.org/10.3386/w26983>
- Barajas, A., Chami, R., Hakura, D., Montiel, P., & Tressel, T. (2011). Workers' remittances and the equilibrium real exchange rate. *Economía*, 11(2), 45–99. <https://doi.org/10.1353/eco.2011.0018>
- Bouraoui, T., & Hammami, H. (2017). Does political instability affect exchange rates in Arab Spring countries? *Applied Economics*, 49(55), 5627–5637.
- Bouraoui, T., & Phisuthiwatcharavong, A. (2015). On the determinants of the THB/USD exchange rate. *Procedia Economics and Finance*, 30, 137–145.
- Bush, G., & Noria, G. L. (2021). Uncertainty and exchange rate volatility: Evidence from Mexico. *International Review of Economics & Finance*, 75, 704–722. <https://doi.org/10.1016/j.iref.2021.05.010>
- Calvo, G. A., & Reinhart, C. M. (2002). Fear of floating. *Quarterly Journal of Economics*, 117(2), 379–408. <https://doi.org/10.1162/003355502753650274>
- Chahrour, R., Cormun, V., De Leo, P., Guerrón-Quintana, P. A., & Valchev, R. (2021). *Exchange rate disconnect redux* (Working paper). Boston College.

- Chen, L., Du, Z., & Hu, Z. (2020). Impact of economic policy uncertainty on exchange rate volatility of China. *Finance Research Letters*, 32, 101266. <https://doi.org/10.1016/j.frl.2019.101266>
- Dincer, N., Eichengreen, B., & Geraats, P. (2019). Transparency of monetary policy in the postcrisis world. In *Oxford handbook of the economics of central banking* (pp. 287–318). Oxford University Press.
- Djalo, M. U., Yusuf, M., & Pudjowati, J. (2023). The impact of foreign debt on export and import values, the Rupiah exchange rate, and the inflation rate. *Journal Ekonomi*, 12(1), 1124–1132.
- Dominguez, K. M. (1998). Central bank intervention and exchange rate volatility. *Journal of International Money and Finance*, 17(1), 161–190. [https://doi.org/10.1016/S0261-5606\(97\)00029-9](https://doi.org/10.1016/S0261-5606(97)00029-9)
- Dornbusch, R. (1976). Expectations and exchange rate dynamics. *Journal of Political Economy*, 84(6), 1161–1176. <https://doi.org/10.1086/260506>
- Eichengreen, B., Rose, A. K., & Wyplosz, C. (1995). Exchange market mayhem. *Economic Policy*, 10(2), 249–312. <https://doi.org/10.2307/1344591>
- Essayad, M., Palamuleni, M., & Satyal, C. (2018). Remittances and real exchange rates in South Asia: The case of Nepal. *Asian Economic and Financial Review*, 8(10), 1226–1238. <https://doi.org/10.18488/journal.aefr.2018.810.1226.1238>
- Feng, Y. (2001). Political freedom, political instability, and policy uncertainty. *International Studies Quarterly*, 45(2), 271–294. <https://doi.org/10.1111/0020-8833.00194>
- Frankel, J. A. (1979). On the mark. *American Economic Review*, 69(4), 610–622.
- Gayathri, R., Vijayabanu, C., & Theresa, C. (2024). Economic disruption and global obscurity: Insights and challenges. In *Economic Uncertainty in the Post-Pandemic Era* (pp. 1–26). Routledge.
- Georgiadis, G., Grab, J., & Khalil, M. (2020). *Global value chain participation and exchange rate pass-through* (Discussion Paper No. 67/2020). Deutsche Bundesbank.
- Ghosh, S. (2011). Examining crude oil price–exchange rate nexus for India during the period of extreme oil price volatility. *Applied Energy*, 88(5), 1886–1889. <https://doi.org/10.1016/j.apenergy.2010.10.043>
- Goldberg, P. K., & Knetter, M. M. (1997). Goods prices and exchange rates. *Journal of Economic Literature*, 35(3), 1243–1272.
- Hansi, M. K. T. N. (2023). The impact of monetary policy on the economy: A case of Sri Lanka. *International Journal of Economic Behavior and Organization*, 11(2), 61–79. <https://doi.org/10.11648/j.ijebo.20231102.12>

- Hassan, G. M., & Shakur, S. (2017). Nonlinear effects of remittances on per capita GDP growth in Bangladesh. *Economies*, 5(3), 25. <https://doi.org/10.3390/economies5030025>
- Khan, M. A., Majeed, R., Khan, M. I., & Ayub, G. (2025). Exchange rate volatility, trade openness, and economic growth in Pakistan: An ARDL cointegration analysis. *Pakistan Journal of Social Science Review*, 4(4), 1217–1232.
- Khan, Z., Ali, S., & Khalid, S. (2016). Remittances inflow and real exchange rate: A case study of Pakistan economy. *Journal of Chinese Economics*, 4(2), 89–94.
- Krugman, P. R., Obstfeld, M., & Melitz, M. J. (2018). *International economics: Theory and policy* (11th ed.). Pearson Education.
- Kumar, A., Bhutto, N. A., Mangrio, K. A., & Kalhor, M. R. (2019). Impact of external debt and exchange rate volatility on domestic consumption: New evidence from Pakistan. *Cogent Economics & Finance*, 7(1), 1568656. <https://doi.org/10.1080/23322039.2019.1568656>
- McCloud, N., Delgado, M., & Jin, M. (2021). Foreign capital inflows, exchange rates, and government stability. *SSRN Working Paper*. <https://doi.org/10.2139/ssrn.3815067>
- Mirchandani, A. (2013). Analysis of macroeconomic determinants of exchange rate volatility in India. *International Journal of Economics and Financial Issues*, 3(1), 172–179.
- Mohamud, M. H., & Mohamud, F. A. (2025). Exploring the relationship between exchange rate and trade balance in Somalia: A Bayesian VAR approach. *Cogent Economics & Finance*, 13(1), Article 2522338. <https://doi.org/10.1080/23322039.2025.2522338>
- Narayan, P. K., Narayan, S., Prasad, A., & Prasad, B. C. (2010). Tourism and economic growth. *Tourism Economics*, 16(1), 169–183. <https://doi.org/10.5367/000000010790872006>
- Obstfeld, M., & Rogoff, K. (2000). New directions for stochastic open economy models. *Journal of International Economics*, 50(1), 117–153. [https://doi.org/10.1016/S0022-1996\(99\)00034-5](https://doi.org/10.1016/S0022-1996(99)00034-5)
- Obstfeld, M., Shambaugh, J. C., & Taylor, A. M. (2010). Financial stability, the trilemma, and international reserves. *American Economic Journal: Macroeconomics*, 2(2), 57–94. <https://doi.org/10.1257/mac.2.2.57>
- Okot, A. (2022). *Determinants of the exchange rate, its volatility and currency crash risk in Africa's low- and lower-middle-income countries* (EIB Working Paper 2022/12). European Investment Bank.
- Ormaechea, M. S. A. (2020). *Public debt dynamics and intra-year exchange rate fluctuations* (IMF Working Paper No. 20/261). International Monetary Fund. <https://doi.org/10.5089/9781513561585.001>

- Rajakaruna, H. (2017). An investigation of factors affecting exchange rate fluctuations in Sri Lanka. *Journal of South Asian Studies*, 5(2), 101–115.
- Ratha, D. (2013). The impact of remittances on economic growth and poverty reduction. *Migration Policy Brief*, 8(1), 1–13. World Bank.
- Ratha, D., De, S., Plaza, S., Schuettler, K., Shaw, W., Wyss, H., & Yi, S. (2016). *Migration and development brief: Migration and remittances—Recent developments and outlook*. World Bank.
- Reinhart, C. M., & Rogoff, K. S. (2004). The modern history of exchange rate arrangements: a reinterpretation. *the Quarterly Journal of economics*, 119(1), 1-48.
<http://www.nber.org/papers/w8963>
- Rodrik, D. (2000). Participatory politics, social cooperation, and economic stability. *American Economic Review*, 90(2), 140–144. <https://doi.org/10.1257/aer.90.2.140>
- Romero, A. M. (2005). Comparative Study: Factors that Affect Foreign Currency Reserves in China and India. *Honors Projects Paper*, 33.
https://digitalcommons.iwu.edu/econ_honproj/33
- Saeed, A., Awan, R. U., Sial, M. H., & Sher, F. (2012). An econometric analysis of determinants of exchange rate in Pakistan. *International Journal of Business and Social Science*, 3(6), 184–196.
- Shrestha, P. K. (2016). Macroeconomic impact of international reserves: Empirical evidence from South Asia. *NRB Economic Review*, 28(1), 1–26.
- Tung, L. T., & Thang, P. N. (2022). Impact of exchange rate on foreign tourist demand: Evidence from developing countries. *GeoJournal of Tourism and Geosites*, 45(4), 1579-1585.
<https://doi.org/10.30892/gtg.454spl06-977>
- Wimalasuriya, S. (2007). Exchange rate pass-through: To what extent do prices change in Sri Lanka? *Staff Studies*, 37(1).
- World Tourism Organization (2021), *The Economic Contribution of Tourism and the Impact of COVID-19, preliminary version*, UNWTO, Madrid, DOI: <https://doi.org/10.18111/9789284423200>.
- Youness, M. (2022). The impacts of political uncertainty on the currency exchange rate. *Technium Social Sciences Journal*, 28, 414–429.
- Zhang, G., & MacDonald, R. (2014). Real exchange rates, the trade balance and net foreign assets. *Open Economies Review*, 25(4), 635–653.

Appendix 1.

Given below is the description related to each year political stability information from 2013 to 2022 (News First, n.d.-a).

Table 5. Political Stability Information

1	January 2013	A political crisis erupted as a direct consequence of the dismissal of Chief Justice Shirani Bandaranayake in January of 2013
---	--------------	---

2	January 2015	Maithripala Sirisena's victory over President Mahinda Rajapaksa in the presidential election in January 2015 ushered in a substantial political transformation.
3	August 2015	Parliamentary elections serve to fortify the coalition government's authority.
4	October 26, 2018	A constitutional crisis ensues in Sri Lanka when President Maithripala Sirisena dismisses Prime Minister Ranil Wickremesinghe and appoints Mahinda Rajapaksa in his stead
5	November 9, 2018	Constitutional crisis in Sri Lanka
6	November 2018	Maithripala Sirisena proclamation-dissolves Parliament and schedules emergency elections for approximately January 5, 2019.
7	January 5, 2019	Maithripala Sirisena proclamation-dissolves Parliament and schedules emergency elections for approximately.
8	December. 6, 2018	Ranil Wickremesinghe has been restored to his role as Prime Minister of Sri Lanka after President Maithripala Sirisena ended the constitutional coup by restoring him to office.
9	April 21, 2019	Hundreds of people were killed in Sri Lanka in a group of organized terrorist strikes on churches and hotels. The political ramifications of this tragedy were substantial, and it prompted new safety protocols
10	April 27, 2019	Gotabaya Rajapaksa declared his candidacy for president in Sri Lanka's upcoming presidential contest.
11	April 29, 2019	A gunfight between security forces and National Thowheeth Jama'ath militants who were involved with easter bomb attack, in the town of Sainthamaruthu.
12	November, 16, 2019	Gotabaya Rajapaksa was elected as President in Sri Lanka.
13	August 2020	Parliamentary elections were conducted in Sri Lanka in August 2020. The Sri Lanka Podujana Peramuna (SLPP), which was spearheaded by the Rajapaksa brothers, emerged victorious with a substantial majority.
14	September 2021	The government declared an economic emergency due to a severe foreign exchange crisis
15	March 31, 2022	Hundreds of people attack President Gotabaya Rajapaksa's Mirihana home to expose the government's economic incompetence.
16	April 1, 2022	An emergency is declared by President Gotabaya Rajapaksa.
17	April 2, 2022	A curfew of 36 hours is enforced across the entire island in an effort to prevent further demonstrations.
18	April 3, 2022	political crisis: A simultaneous resignation of every 26 ministers of government, with the exception of Prime Minister Mahinda Rajapaksa.
19	April 9, 2022	Antigovernment protestors occupied Galle face and established "Gota Go Gama"
20	May 9, 2022	Mahinda Rajapaksa tenders his resignation as prime minister. 2022 A brutal attack is launched by Rajapaksa supporters against anti-government demonstrators within the Gota Go Gama dem the inauguration of Ranil Wickremesinghe as the eighth prime minister onstration site.
21	May 12, 2022	Ranil Wickremesinghe is sworn in as the new Prime Minister.
22	June 9, 2022	Former finance minister Basil Rajapaksa tenders his resignation from his National List seat.

23	July 9, 2022	Demonstrators break into the President's official mansion and burn the Prime Minister's. Protesters threatened to seize the President's House until the President and Prime Minister resigned.
24	July 13, 2022	President Gotabaya Rajapaksa resigns on July 13 and Prime Minister Ranil Wickremesinghe quits after a new all-party administration is created.