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The Impact of Exchange Rate Fluctuation on Tourist Arrivals of Sri Lanka

K.J.M. Surantha Sanjaya

Full Time Lecturer in Marketing & Business Operations, Travel & Tourism and Hospitality English)

Times Academy Private Limited, No 46, Samantha's Building, George E De Silva Mawatha, Kandy (20000), Sri Lanka

ABSTRACT: This study analyses the impact of exchange rate fluctuations on tourist arrivals to Sri Lanka using time series data from 1960 to 2023. Independent variables include the annual average exchange rates of the US Dollar, the British Pound, Japanese Yen (JPY) and Indian Rupee and a "Dummy" variable indicating the economic policy change in 1977 (0 for inward policy before 1977 and 1 for outward policy after 1977). These currencies were selected based on recent report by the Central Bank of Sri Lanka that highlighted the significant fluctuations in exchange rates against the Sri Lankan Rupee (LKR).

The results showed no statistically significant association between these exchange rates and tourist arrivals, with high p-values (above 0.05) and very low R-squared values, suggesting that exchange rate fluctuations do not have a significant impact on tourist arrivals to Sri Lanka. The dummy variables also showed no significant effect, indicating that the policy change did not affect tourist numbers.

Augmented Dickey-Fuller test confirmed that the original time series data was not stationary but became stationary after the first differentiation. Multiple regression analysis of the differentiated data, variance inflation factors (VIFs) and tolerances did not indicate multicollinearity between the independent variables.

Based on these findings, several recommendations are proposed to improve Sri Lanka's tourism sector. Diversifying marketing strategies through digital marketing and social media can promote the country's cultural heritage and attractions. Significant investment in tourism infrastructure such as transport networks and accommodation are essential to enhance the tourist experience. Ensuring geopolitical stability and robust security measures will boost tourist confidence. Developing niche tourism segments such as ecotourism and adventure tourism will cater to specific interests while simplified visa policies and improved air connectivity will increase accessibility. Finally, staying on top of global tourism trends and adapting strategies accordingly will help Sri Lanka maintain its competitiveness as a tourist destination.

These strategies are aimed at promoting tourism sector growth regardless of exchange rate fluctuations and ensuring the sustainable development of tourism in Sri Lanka.

CHAPTER 1 – INTRODUCTION TO THE RESEARCH STUDY WITH ITS BACKGROUND

1.1 Introduction

This chapter clears the way to the research study which strives to determine how fluctuations of exchange rate make impact on tourist arrivals of Sri Lanka. The researcher will develop the theoretical conceptions in order to draw a satisfactory note towards the ultimate objective of this particular research based on a background of the study.

1.2 Background of the Study

Over the past decade, there was a considerable improvement in foreign visitor arrivals in Sri Lanka from different countries. Much conjecture surrounds the factors influencing the trends and in particular, the function of movements in exchange rates which have observed the fluctuations over the periods. The Sri Lankan tourism industry, as one of the fastest developing industries of the post conflict economy, achieved multitude of success during 2023. As per Sri Lanka Tourism Development Authority (2024), tourist arrivals recorded 1,487,303. Throughout the year 2023, there was a considerable improvement in tourist arrivals by 106.6% when compared to the corresponding months of the year 2022 which indicates a positive trajectory for tourism industry of Sri Lanka. This surge represents a much more interest in Sri Lanka as a preferred destination for tourism. September 2023 accounted for the most substantial growth rate, soaring by 275.6% from the previous year 2022. This surge could be characterized to various factors such as favourable weather conditions and holiday seasons in major source markets. December 2023 witnessed the peak tourist season with the highest number of arrivals which accounted 210,352 visitors. This emphasizes December's popularity, likely forced

by winter vacations and other advantageous conditions. Conversely, Month May accounted the lowest tourist arrivals which is 83,309 visitors. This decline occurred due to less favourable weather conditions and fewer incentives for travel during this period. When breakdown of tourist arrivals is taken into consideration by regions in 2023 indicates that Europe consisted 50.9% of the total arrivals with major contributions from countries such United Kingdom, Russia, France and Germany driving this growth. Conversely, a substantial improvement in arrivals from China, India and Maldives significantly boosted tourist numbers in the Asia and Pacific region which accounted for 40.1% of the total arrivals. The United State of America contributed 6.4% to the overall arrivals. However, Middle East region comprised 1.9%. while Africa accounted for a modest share of 0.7% in total tourist arrivals. These statistics emphasize the variety of tourism patterns across regions highlighting the impact of specific regions and countries on the globe.

Tourist arrivals for business purposes counted for a marginal level of 4.5 % while the share of tourist arrivals for other purposes such as pleasure, MICE, visiting friends and relatives was about 77% of total arrivals in 2023.

According to the Central Bank of Sri Lanka (2024), the Sri Lanka rupee appreciated gradually in 2023 under a market-based exchange rate policy executed by the Central Bank although there was some intermittent volatility. The appreciation trend remains since then and the Sri Lanka rupee appreciated by 2.1% against the US dollar in January 2024. The Sri Lanka rupee depreciated by 44.8 % against the US dollar in 2022 appreciated by 12.1% in 2023. Meanwhile when other currencies are taken into consideration, the Sri Lanka rupee appreciated against other major currencies, such as the euro by 7.9%, the pound sterling by 6%, the Japanese yen by 19.5%, the Indian rupee by 12.6% and the Australian dollar by 10/8% during 2023. The real effective exchange rate appreciated during the month of December 2023. However, the real effective exchange rate recorded an overall depreciation in 2023.

The exchange rates of Sri Lanka including the other counties are major influential signals for attracting the tourists into Sri Lanka. The fluctuations in the value of exchange rates highly affect the number of arrivals of tourists being attracted to Sri Lanka. Therefore, this research study specially focuses on the impact on the arrivals of the tourists into Sri Lanka due to the fluctuations in the value of exchange rates with various countries.

1.3 Objective of the Research

To empirically investigate the impact of fluctuation in various exchange rates on tourist arrivals of Sri Lanka.

1.4 Limitations of the Study

This study focuses only on the empirical data of Sri Lanka related to tourist arrivals and different exchange rates. Different exchange rates are associated with different countries but the relationship analysed in this study is only applicable to Sri Lanka. Hence, this study does not consider any kind of correlation test related to other countries.

1.5 Chapter Summary

The above chapter carries the background of the study and critical consideration has been given by the researcher towards many crucial areas such as limitations of the study and the research objective which are more likely to drive this study towards an unbiased destination and as a result, the researcher currently has the task of referring previous literature gathered on related topics to this research study. Therefore, second chapter carries a critical evaluation of literature which will provide a foundation on which this research study will be built.

CHAPTER – 2 LITERATURE REVIEW

2.1 Introduction

Since the researcher has to generate and refine research ideas while critically reviewing them, the literature review plays a vital role during this study. In order to identify and test the theories and ideas, to develop a conceptual framework for the research as well as to explore data while developing theories from them, It will be required to heavily rely on the literature review. As a result, this particular chapter carries a critical review of the literature including concepts, theories and ideas related to exchange rate and its impact on tourist arrivals from previous studies.

2.2 Literature Review

2.2.1 Concepts of Exchange rate, Exchange rate volatility, Tourist arrivals and Outward economic oriented policy implemented in Sri Lanka

Exchange rates are the price of one currency relative to another. Exchange rate agreements are decided by governments. Other exchange rates approved by governments are market rates and are determined primarily by legal market forces, or in the case of countries with multiple exchange rate agreements, primary, secondary and tertiary rates. Development relevance. In a market-oriented economy, resource allocation decisions made by households, producers and governments are influenced by relative

prices, including real exchange rates, real wages, real interest rates and other prices in the economy. Relative prices also significantly reflect the decisions of these players. Relative prices convey vital information about the interactions of economic agents within an economy and with the rest of the world (The World Bank, 2024).

Hook and Boon (2000) stated that since the introduction of the floating exchange rate regime in 1973, the impact of exchange rate fluctuations on international trade volumes has been the subject of theoretical and empirical research. Exchange rate volatility is the threat connected with unanticipated fluctuations in exchange rates. Economic fundamentals such as inflation rates, interest rates, and balance of payments have become more volatile since the 1980s and early 1990s, which in themselves are sources of exchange rate fluctuations. More recently, increased cross-border capital flows, facilitated by capital liberalization, technological advances, and trends in currency speculation, have also caused exchange rate fluctuations (Hook and Boon 2000). Since the inception of the general floating exchange rate regime in 1973, the uncertainty and the volatility of exchange rate fluctuations has been very high that it has prompted researchers and policymakers to investigate the nature and extent of the impact of such fluctuations.

Foreign visitors are the number of tourists who travel to a country away from their general environment, other than their country of usual residence, for a period of 12 months or less, with the main purpose of visiting, not a paid activity within the country visited. The source of arrivals and the method of collection vary from country to country. In some cases, data are obtained from border statistics (police, immigration, etc.) and supplemented by border surveys. In other cases, data are obtained from accommodation providers. Some countries limit their arrivals to those arriving by air, others to those staying in a hotel. Some countries consider the arrivals of their nationals abroad, others do not. Therefore, care should be taken when comparing arrivals between countries. Inbound data refers to arrivals, not travellers. Therefore, if a person travels to a country multiple times in a given period, each time is counted as a new arrival (The World Bank, 2024)

Dornbusch (1992) stated that in 1977, following the disadvantageous economic results of its inward-looking policies, Sri Lanka became the first country in South Asia to embark on a comprehensive economic liberalization process. The first wave of reforms, from 1977 to 1979, included comprehensive trade liberalization, a redesign of the foreign investment approval and supervision process to give new incentives to investors, comprehensive interest rate reform and opening up of the banking sector to foreign banks, restrictions on public sector participation in the economy and redetermination of the exchange rate. Despite continuing significant macroeconomic problems, political instability and ethnic conflict since 1983, market-oriented reforms have been sustained and expanded over the years. A "second wave" liberalization package was announced in 1990, which included an ambitious privatization program, further tariff reductions and simplification of the customs structure, and the lifting of exchange controls on current account transactions. After nearly two decades of significant reforms, Sri Lanka is now considered one of the most open economies in the developing world.

Aforesaid policy direction will carry on for the foreseeable future. Indeed, the most dramatic change in Sri Lanka's political landscape in recent years has been the coming together of the major parties and groups around overall economic policy. The achievement of greater openness and liberalization is now a bipartisan policy in Sri Lanka.

2.2.2 Findings of previous studies related to impact of foreign exchange and its volatility on Tourist Arrivals.

Lelwala and Gunaratne (2008) investigated the economic determinants of short-run and long run tourism demand from United Kingdom to Sri Lanka by utilizing error correction mechanism and co-integration with the use of quarterly time series data for the period from quarter 1 of 1987 to quarter 4 of 2007. Study reveals that the exchange rate variable is significant in long run revealing the elasticity of around 0.7, but it causes to improve the arrival of tourists slightly since the positive elastic is less than one. Study concludes that exchange rate showed a positive effect on tourist arrivals in the long run that is a favourable exchange ratio between Sri Lankan rupee and Pound Sterling may gain a beneficial situation for Sri Lankan tourism in the long run, but as per the analysis there is no impact in the short run.

Chang and McAleer (2009) revealed conditional volatility estimates are not made impact by the long memory properties of the conditional mean specification. This study investigated daily arrivals of Korean tourists in Taiwan from January 1, 1990 to December 31, 2008. A heterogeneous autoregressive (HAR) model was used to capture the long-memory characteristics of both datasets. Empirical results showed that the time series of Korean tourists to Taiwan and the won/NT dollar exchange rate were constant. Furthermore, the estimated symmetric and asymmetric conditional volatility models, especially the widely used GARCH, GJR, and EGARCH models, all fit the data very well. In particular, the estimated models were able to explain the persistence of higher volatility observed at the end of the sample period, mainly due to the global financial crisis. The empirical conditions for the second moment also generally supported the statistical validity of the model of Korean tourist arrivals in Taiwan (constant won/NT dollar exchange rate), and statistical inference was valid. Moreover, the estimates were similar to those from financial time series data, showing short- and long-term shock persistence and asymmetric effects of positive and negative shocks of the same magnitude as volatility.

George et al. (2014) investigated the impact of exchange rate fluctuations on tourist flows to Turkey in the period 1994–2012 through cointegration analysis. As per findings (i) there is a negative relationship between exchange rate fluctuations and tourist flows to Turkey; (ii) relative price ratios have a negative effect on tourist flows, suggesting that relatively expensive locations discourage tourists in the face of intense international competition among alternative destinations; (iii) GDP per capita in the tourist's origin measured in purchasing power parity has a positive effect on tourist flows. Finally, they draw conclusions and suggest some direct policy conclusions. First, policymakers in tourist destination countries who wish to target potential markets for their tourism products should generally avoid markets that are susceptible to exchange rate fluctuations due to political and social upheaval or financial instability

Agiomirgianakis et al. (2015) examined the impact of exchange rate volatility (ERV) on Iceland's tourist exports from the first quarter of 1990 to the fourth quarter of 2014. Some researchers argue that exchange rate volatility leads to a decline in tourist numbers. This study proposes a new measure to measure volatility. The empirical methodology used is based on the theory of cointegration and an error-corrected representation of exchange rate volatility measures using cointegration autoregressive distributed lag (ARDL) modelling. Overall, results suggest that volatility has a negative impact on tourist arrivals in Iceland.

Nugroho et al. (2017) revealed through the study conducted based on both primary data (a simple survey of 300 foreign tourists, and in the second stage a survey of 1000 foreign tourists in major tourist destinations in Bali) and secondary data (secondary data is a time series). From the data of the Indonesian Rupiah (IDR) to US Dollar exchange rate, foreign tourist arrival statistics, hotel room occupancy and other related data, it can be seen that the increase in room prices has not affected the tourist demand for accommodation in Bali. As with the room occupancy, the number of foreign tourist arrivals also shows the same trend during periods of both appreciation and depreciation. It is also noted that the increasing trend of foreign tourists accelerated during the appreciation. Therefore, the study concludes that tourists do not respond to the exchange rate in terms of their travel behaviour. The survey also shows that although some respondents believe that the exchange rate influences their decision to travel to Bali, the influence is not significant when comparing all respondents (21.93% in the first stage of the survey and 8% in the second stage of the survey).

Karimi, Khan and Karmelikli (2018) found that the asymmetric impact of exchange rate and tourism receipts on tourist arrivals in Malaysia. A nonlinear model was developed to examine the symmetric and asymmetric impacts of quarterly exchange rate data from 2000 to 2017. The results reveal that depreciation and appreciation of the local currency led to a decline in inbound tourist arrivals in the long run. Furthermore, it is found that price rigidity in Malaysia's tourism sector may affect tourists' decision to choose alternative destinations. Furthermore, study reveals a decline in the real effective exchange rate has no adverse impact in the long run.

Tung (2019) investigated the impact of exchange rate policy on the number of foreign tourists in Vietnam from 2006 to 2018. The regression results show that the exchange rate has a positive impact on the demand of foreign tourists, and the devaluation of the local currency also had a positive impact on the number of foreign tourists in Vietnam. The quantitative results also show that the number of foreign tourists in the early period has a positive impact on the current period.

Nugroho et al. (2017) revealed from the study conducted titled "The Impact of Oil Price, Internet, and Exchange Rate Fluctuations on the Number of Foreign Tourists in Indonesia" using a time series dataset from 1995 to 2018 and an Autoregressive Distributed Lag Model (ARDL) and an Error Correction Model (ECM-ARDL). The study shows that the Internet has a long-term positive impact on the number of foreign tourists. For every 1% increase in the Internet, the number of foreign tourists increases by 0.49%. However, the fluctuations in oil prices and exchange rates do not have a significant impact on the number of foreign tourists. In the short term, the fluctuations in oil prices have a negative impact on the number of foreign tourists. At the same time, the exchange rate has a positive impact on the number of foreign tourists.

Jena and Dash (2020) investigated the degree and structure of the impact of exchange rate fluctuations and volatility on tourist arrivals to India using quantile regression analysis (QRA) over the period January 1990 to March 2015. The study used tourist arrivals as the dependent variable. The independent variables are world GDP per capita, INR/USD nominal exchange rate, and exchange rate volatility. The impact of exchange rates on global tourist arrivals and the situation of the ten largest countries were investigated. With regard to the impact of exchange rate changes, the results contrast for both measures of tourist arrivals. In the case of total tourist arrivals to India, the impact is positive, meaning that devaluation (appreciation) of the local currency has a positive (negative) impact in periods of normal to bad phase of tourist arrivals. However, for the top 10 countries, devaluation (increase) of their national currency has a negative (positive) impact on tourist arrivals in very good and bad times. However, for these top 10 countries, the per capita income of the respective country is much more important, as it has a strong positive impact on all conditions of tourist arrivals. A similar effect is observed for exchange rate fluctuations. Moreover, the impact of exchange rate changes and volatility is asymmetric when tourist arrival conditions in the top 10 countries are different. Therefore, the same tourism policy may not work in all situations.

The Impact of Exchange Rate Fluctuation on Tourist Arrivals of Sri Lanka

Aslanoglu, Erdogan, and Aksu (2021) examined the impact of host country GDP and host country real exchange rate on tourist arrivals from 65 countries to Turkey. A panel cointegration analysis utilizing cross-sectional dependence with common correlated effects (CCE) method was conducted for the period from 2002Q1 to 2017Q4. The preliminary results of the study suggest that both real exchange rate and GDP affect international tourist arrivals to Turkey. However, the extent of the impact varies depending on the countries studied.

2.3 Chapter Summary

As a result of the above executed literature review, this chapter laid the foundation towards third chapter (the methodology of the research study) which will involve an empirical investigation using multiple sources of evidences.

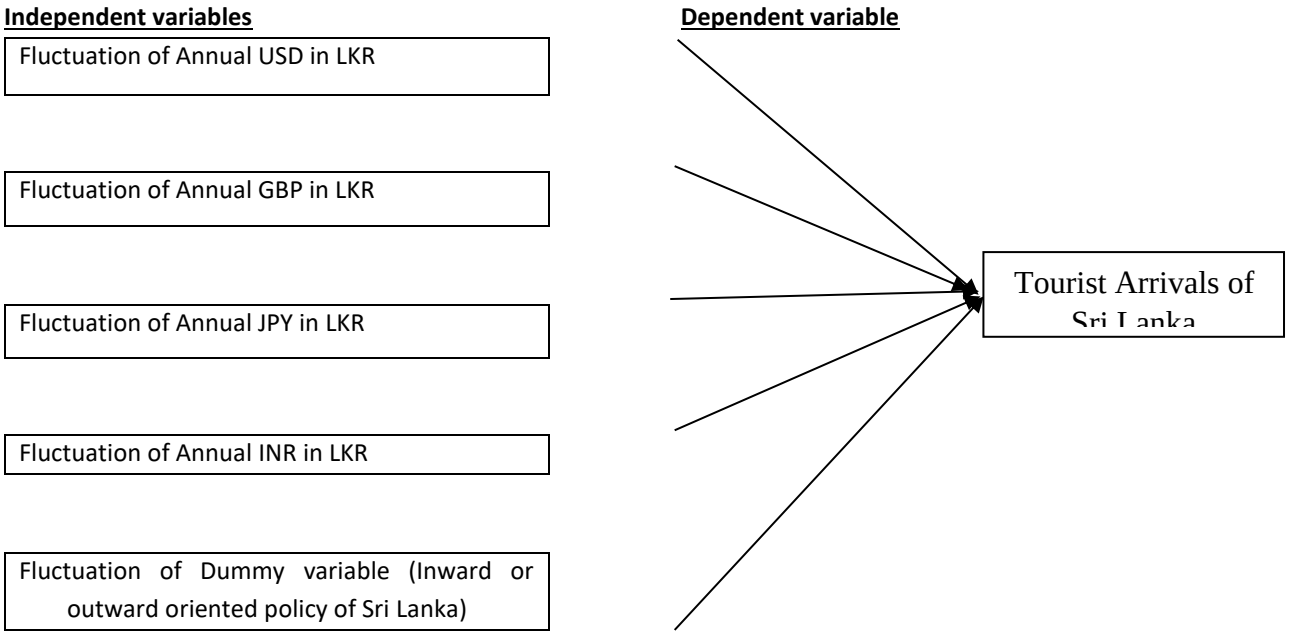
CHAPTER THREE- METHODOLOGY

3.1 Introduction

Research methodology or study design simply refers to the system of collecting data for a particular research project. Such data may be collected in order to conduct theoretical or practical research. However, this chapter portrays the methodology of the current research paying significant concentration towards the types of data utilized and approach to data collection and analysis. Once this chapter is conducted successfully, the researcher will have the opportunity to develop a comprehensive data analysis by paying special emphasis towards maintaining the unbiased nature of the overall research.

3.2 Method of data collection and Conceptual framework

Research is a systematic investigation. Therefore, it is significant to construct a theoretical frame work. According to the literature review, the study found so many variables. As to the objective of this research and considering information of recent press releases and annual reports of Central Bank, Sri Lanka under the heading “External sector performance”, following variables will be analysed because appreciation and depreciation of exchange rate of Sri Lanka through recent press releases and recent annual reports of Central Bank of Sri Lanka have been mainly revealed against international currencies of United State Dollar (USD), Pound Sterling (GBP), Indian Rupee (INR) and Japanese Yen (JPY). Therefore, official annual yearly average of above mentioned each international currency in Sri Lankan rupee (LKR) – “LCU per International currency yearly average” from 1960 to 2023 based on information collected from database of World Bank and annual reports of Central Bank of Sri Lanka was considered as independent variables while number of tourist arrivals from 1960 to 2023 gathered from yearly reports of Sri Lanka Tourism Development Authority was considered as the Dependent variable. Further a “Dummy” independent variable was also introduced for the model. The dummy variable can be defined as 1 for outward oriented economic policy of Sri Lanka executed in 1977 and after 1977. Dummy variable can be defined as 0 for Inward oriented economy policy of Sri Lanka executed before 1977.
The relationship between dependent variable and independent variables are draft on the following conceptual frame work.



Below are developed null hypothesis and alternative hypothesis based on Conceptual framework developed.
HP 1 (null) – There is not a relationship between fluctuation of US Dollar and Tourist arrivals of Sri Lanka.

HP 1 (alternative) – There is a relationship between fluctuation of US Dollar and Tourist arrivals of Sri Lanka.
HP 2 (null) – There is not a relationship between fluctuation of Pound Sterling and Tourist arrivals of Sri Lanka.
HP 2 (alternative) – There is a relationship between fluctuation of Pound Sterling and Tourist arrivals of Sri Lanka.
HP 3 (null) – There is not a relationship between fluctuation of Japanese Yen and Tourist arrivals of Sri Lanka.
HP 3 (alternative) – There is a relationship between fluctuation of Japanese Yen and Tourist arrivals of Sri Lanka.
HP 4 (null) – There is not a relationship between fluctuation of Indian Rupee and Tourist arrivals of Sri Lanka.
HP 4 (alternative) – There is a relationship between fluctuation of Indian Rupee and Tourist arrivals of Sri Lanka.
HP 5 (null) – There is not a relationship between fluctuation of Dummy variable (inward or outward oriented policy) and Tourist arrivals of Sri Lanka.
HP 5 (alternative) – There is a relationship between fluctuation of Dummy variable (inward or outward policy) and Tourist arrivals of Sri Lanka.
Using above mentioned hypotheses, the following model has been developed:

Tourist Arrivals of Sri Lanka = *f* (FUSD, FGBP, FJPY, FINR, FD)

Where; FUSD is fluctuation of US Dollar, FGBP is fluctuation of Pound Sterling. FJYP is fluctuation of Japanese Yen and finally FD is fluctuation of Dummy variable which represents inward or outward oriented economy policy of Sri Lanka.

3.3 Method of Data Analysis & Presentation

The data collected by the researcher are analysed in such a way to make interpretations. Since above mentioned all independent variables and dependent variables are time series, it is crucial to investigate stationary and allow for difference if data are non-stationary before regression analysis is run. Therefore, Augmented Dickey-Fuller test is applied to test the stationary of the time series data before applying Multiple Regression. After confirmation of stationarity or variables are not suffering from the problem of spuriousness, multiple regression is useful not only to investigate the relationship between independent variables and the dependent variable but also to examine any collinearity among independent variables which disrupts the relationship of independent variables with the dependent variable. Inferential analysis includes multiple Regression analysis which is interpreted through the Multiple R, R Square, P- value...Etc. Therefore, the collected data are analysed and interpreted using the following statistical tools and techniques.

3.3.1 Correlation Analysis ("r")

The level of association between the two or more variables has described in this analysis. When it comes to analysis, all the variables need to be numerical (quantitative). The value is ranging from -1 to +1. If the correlation coefficient is negative, then the variables are inversely proportional and it is -1; if the coefficient is 0, there is no association between variables. If the coefficient ends up with a positive value, then the variables are directly connected and its highest value is +1.

Figure 2: Equation of correlation coefficient

$$r = \frac{n\sum xy - \left(\sum x\right)\left(\sum y\right)}{\sqrt{n\left(\sum x^2\right) - \left(\sum x\right)^2}\sqrt{n\left(\sum y^2\right) - \left(\sum y\right)^2}}$$

3.3.2 Multiple R

Multiple correlation coefficients (Multiple R) are a measure of the Strength and the direction of the relationship between independent variables and dependent variable. It (Multiple R) ranges from +1 to -1. +1 which is considered as very strong direct relationship, "0" is considered as no relationship, to -1 is considered as very strong inverse relationship.

3.3.3 Coefficient of Determination (R Square)

Coefficient of determination (R Square) is a statistic that will give some information about the goodness of fit of a model. In regression, the Coefficient of determination (R Square) is statistical measure of how well the regression line approximates the real data points. Value of 1 indicates that the regression line completely fits the data. R Square is always positive. The R Square assumes that every independent variable in the model helps to explain variation in the dependent variable. So, it tells the percentage of explained variations as if all independent variables in the model affect the dependent variable.

3.3.4 Variance Inflation factor

The Variance Inflation Factor explains how much the variance of a regression coefficient is inflated due to multicollinearity. A high VIF signals a high level of multicollinearity.

- **A VIF** greater than 10 signals high multicollinearity that may need to be addressed.
- **A VIF** value from 5 to 10 signals moderate multicollinearity.

- **A VIF** lower than 5 signals low or no multicollinearity.

3.3.5 Tolerance

Tolerance means the reciprocal of Variance Inflation Factor. It portrays the amount of variance in an independent variable that is not explained by other independent variables.

- **Tolerance less than 0.1** signals high multicollinearity.
- **Tolerance between 0.1 and 0.2** signals moderate multicollinearity.
- **Tolerance greater than 0.2** signals no multicollinearity.

3.4 Chapter Summary

The above chapter which paid considerable attention towards the development of the research methodology of the research study, the researcher has identified the best possible methods for data collection and analysis in order to enhance the respective research as an important source of knowledge. As a result, a strong foundation has been laid by the researcher in order to develop a satisfactory analysis of gathered data within the fourth chapter which follows where special emphasis will be made towards developing conclusions through the data analysis.

CHAPTER FOUR - DATA ANALYSIS AND PRESENTATION

4.1 Introduction

Data presentation and analysis carries a comprehensive analysis of secondary data which were collected by the researcher from sources of World Bank, Central Bank of Sri Lanka and annual reports of Sri Lanka Tourism Development Authority. Through the usage of appropriate data analysis techniques and tools the researcher tries to develop a strong understanding in order to realize the ultimate objectives of the research study in a way that they will contribute as a valuable source of information for any related research study in the future.

4.1.1Augmented Dickey Fuller Test (Unit root test)

The results (P Values) of the Augmented Dickey Fuller test generated from "E views" software after import of data from excel files are presented in the table 01for all the variables (dependent and independent) used in this model at first difference I (I) under the consideration of situation "trend and intercept". It is observed that all the variables are not suffering from the problem of spuriousness when they are utilized in the model at the first difference I (I). It means that there is no unit root and data are stationary at the first difference I (I). However, researcher had to allow for first difference of all Dependent and Independent variables because there was a unit root (data series is non stationary) at the data level forms I (0) of all the variables when they are applied under the "trend and intercept". Annexure 1 shows all the results of Augmented Dickey Fuller Test both at the data level forms 1 (0) and at the first difference I (I) generated from "E views" application software.

Table 1: Results (P Values) of Augmented Dickey Fuller Test at the first difference 1 (I)

Variable	P Value under consideration of the situation "Trend and Intercept"
Annual USD in LKR	0.0000
Annual AUD in LKR	0.0000
Annual GBP in LKR	0.0000
Annual JPY in LKR	0.0011
Annual INR in LKR	0.0000
Dummy	0.0000

4.1.2 Multiple Regression Analysis

Since stationarity of data can be proven as per above Dickey Fuller Test at the first difference. Multiple regression was executed considering the first difference of data to investigate the relationship between variables. As per multiple regression analysis (Annexure 2), the multiple coefficients of correlation (Multiple R) are 0.212. This indicates that the correlation among the independent and dependent variables is positive. This statistic, which ranges from -1 to +1, does not indicate statistical significance of this correlation. Multiple R = 0.212 suggests a weekly "strong" relationship between independent and dependent variables. However, P value of the ANOVA table is 0.747 which is greater than 0.05. It indicates that there is no statistically significant relationship between concerned independent variables and dependent variable. Further according to coefficient table, P value of each independent variable is higher than 0.05 (Annexure 2). Therefore, it can be concluded that there is not a statistically significant relationship among fluctuation in US Dollar, fluctuation in Pound Sterling (GSP), fluctuation in Japan Yen (JPY), fluctuation in Indian Rupee (INR) and Inward or outward oriented economy policy implemented by Sri Lanka and Tourist arrivals.

Therefore, statistical evidences are sufficient to accept null hypothesis. Value of R square of multiple regression model is 0.045 (Annexure 2) which means that 4.5% of proportion of variance in the dependent variable that can be explained by the independent variables. When both the P value is higher than 0.05 and the R-squared value is very low, it can be reasonably concluded that there is no statistically significant relationship between the independent variables and the dependent variable. In addition, the independent variables do not explain a substantial proportion of the variance in the dependent variable. Since P value of ANOVA table of multiple regression is higher than 0.05 and the R Square value is very low, forming a predictive formula using the intercept and coefficients from the multiple regression is generally not valid for making accurate predictions.

4.1.3 Investigation of collinearity among independent variables

When Variance Inflation factor (VIF) revealed through coefficient table of regression related to independent variables (Annexure 2) is taken into consideration, it can be concluded that variance of regression coefficient is inflated due to multicollinearity is very low because value of VIF of each independent variable is less than 5. In addition to above, tolerance (proportion of variance in an independent variable that is not explained by the other independent variables) revealed through coefficient table of multiple regression of each independent variables are well above than 0.2 which also prove low multicollinearity among independent variables. Considering Variance Inflation Factor and Tolerance, it can be concluded that multicollinearity among independent variables is very low which do not considerably affect the relationship between independent variables and the Dependent variable.

4.2 Chapter Summary

Data presentation and analysis consists of analysis of the secondary data gathered from database of World Bank, annual reports of Central Bank of Sri Lanka and annual reports of Sri Lanka Tourism Development Authority. Considering above analysis, it can be concluded that that there is not a statistically significant relationship among fluctuation in US Dollar, fluctuation in Pound Sterling (GSP), fluctuation in Japan Yen, fluctuation in Indian Rupee (INR) and Inward or outward oriented policy implemented by Sri Lanka and Tourist arrivals by accepting all null hypothesis developed through conceptual framework in the previous chapter. As a result of the data analysis conducted above, the researcher will be paying sharp attention towards developing possible assumptions which will lead towards conclusions and recommendations of this research project by the end of the above discussion.

CHAPTER FIVE - CONCLUSION & RECOMMENDATION

5.1 Introduction

This is one of the most crucial chapters of the research study where the researcher will be attempting to draw conclusions to the analysis of findings while providing suitable recommendations which may be utilized by policy makers of Sri Lankan government that will enhance Tourism and Hospitality industry a better level in future to attract more tourists. Moreover, using the information developed in previous sections the researcher will construct conclusion and recommendation in a way that it ultimately achieves the desired objectives of this research study.

5.2 Conclusion

Based on the analysis of time series data from 1960 to 2023, it is clear that there is no statistically significant relationship between the exchange rate fluctuations under consideration (USD to LKR, GBP to LKR, JPY to LKR, INR to LKR) and the dependent variable (tourist arrivals to Sri Lanka). In addition, the dummy variables representing the economic policy changes in 1977 (representing inward-looking (pre-1977) and outward-looking (post-1977) economic policies) also did not show any significant impact on tourist arrivals.

These results suggest that fluctuations in the exchange rates of the mentioned currencies do not play a significant role in influencing the number of tourists visiting Sri Lanka. This may be attributed to several factors, such as the resilience of tourists' preferences, the dominance of other factors (geopolitical stability, marketing activities, tourism infrastructure, etc.) or the relative insensitivity of tourists to exchange rate fluctuations when choosing Sri Lanka as a destination.

5.3 Recommendation for Enhancing Sri Lanka's Tourism Sector

Considering the findings of the time series analysis, it is imperative for the Sri Lankan government and policymakers to diversify their marketing strategies. Traditional marketing efforts need to be complemented with innovative approaches to appeal to a wider audience. Highlighting Sri Lanka's unique cultural heritage, stunning natural beauty and diverse attractions can attract a diverse tourist demographic. Leveraging social media and digital marketing platforms can help create engaging content showcasing the country's offerings. Targeted campaigns in key source markets can help build a strong brand image and attract more tourists. Investment in tourism infrastructure is essential to enhance the overall tourist experience. This includes improving transport networks, accommodation and tourist facilities. Developing and maintaining tourist attractions in accordance with international standards ensures a pleasant and memorable experience for visitors. Providing quality services and facilities will enable Sri Lanka to attract repeat visitors and positive word of mouth, which are essential for the sustained growth of the tourism

sector.

Ensuring geopolitical stability and implementing robust security measures are essential to attracting and retaining tourists. The Sri Lankan government should prioritize tourist safety by implementing comprehensive security protocols and maintaining political stability. Promoting Sri Lanka as a safe travel destination through international travel advisories and partnerships with global travel agencies will help boost the confidence of potential travellers. A stable and safe environment is a key factor influencing tourists' decisions to visit the country.

Developing niche tourism segments can significantly increase tourist arrivals by catering to specific interests and preferences. Identifying and promoting areas such as ecotourism, adventure tourism, wellness tourism and cultural tourism can attract niche groups of tourists. Marketing efforts should focus on these unique segments and create special travel packages to offer them customized experiences. This approach will not only diversify the tourism portfolio but also attract sophisticated tourists who are willing to spend more money for a unique and personalized experience.

Improving visa policies and accessibility are essential to make Sri Lanka a more attractive travel destination. Simplifying visa procedures and offering visa on arrival or e-visa will make it easier for tourists to visit Sri Lanka. Furthermore, improving air connectivity through negotiations with airlines and increasing direct flights from major tourism source countries will increase accessibility. Easier access and streamlined entry procedures are likely to significantly increase tourist numbers.

To remain competitive in the international tourism market, it is important to stay on top of global tourism trends and adapt strategies accordingly. The Sri Lankan Government should regularly monitor global tourism trends and adapt its policies and strategies accordingly. Engaging with tourists and tourism industry stakeholders to gather feedback will help refine and improve tourism offerings. Flexibility and responsiveness to changing trends and preferences will ensure that Sri Lanka remains an attractive and competitive destination in the global tourism market. By focusing on these areas, the Sri Lankan government can better position the country as a premier tourist destination. These recommendations will help promote growth in the tourism sector regardless of exchange rate fluctuations and ensure the sustainable development of tourism in Sri Lanka.

5.4 Summary

The above chapter carries a construction of conclusions which lead to recommendations adapted from the data analysis conducted in the previous chapter. In other words, data have been converted into information through this chapter and special emphasis was given by the researcher to draw conclusions making sure that they ultimately relate to the objectives of this research study.

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6. Annexures

6.1 Annexure 1

1.1 Screenshots of Augmented Dickey Fuller (ADF) Test at original level forms I (0)

US Dollar in LKR

Series: LKR_PER_USD Workfile: DATA SET 1960-202...

View | Proc | Object | Properties | Print | Name | Freeze | Sample | Genr | Sheet | Graph | Stats

Augmented Dickey-Fuller Unit Root Test on LKR_PER_USD

Null Hypothesis: LKR_PER_USD has a unit root
Exogenous: Constant, Linear Trend
Lag Length: 0 (Automatic - based on SIC, maxlag=10)

		t-Statistic	Prob.*
Augmented Dickey-Fuller test statistic		2.637254	1.0000
Test critical values:	1% level	-4.110440	
	5% level	-3.482763	
	10% level	-3.169372	

*MacKinnon (1996) one-sided p-values.

Augmented Dickey-Fuller Test Equation
Dependent Variable: D(LKR_PER_USD)
Method: Least Squares
Date: 06/08/24 Time: 20:52
Sample (adjusted): 1961 2023
Included observations: 63 after adjustments

Variable	Coefficient	Std. Error	t-Statistic	Prob.
LKR_PER_USD(-1)	0.066425	0.025187	2.637254	0.0106
C	0.478560	1.323354	0.361626	0.7189
@TREND("1960")	-0.028390	0.080949	-0.350718	0.7270

R-squared	0.446613	Mean dependent var	3.694732
Adjusted R-squared	0.428166	S.D. dependent var	5.127479
S.E. of regression	3.877383	Akaike info criterion	5.594646
Sum squared resid	902.0459	Schwarz criterion	5.696700
Log likelihood	-173.2313	Hannan-Quinn criter.	5.634784
F-statistic	24.21158	Durbin-Watson stat	1.997603
Prob(F-statistic)	0.000000		

GBP (Pound Sterling) in LKR

Series: LKR_PER_POUND_STERLING Workfile: DATA SET 1960-2023...

View | Proc | Object | Properties | Print | Name | Freeze | Sample | Genr | Sheet | Graph | Stats | Ident

Augmented Dickey-Fuller Unit Root Test on LKR_PER_POUND_STERLING

Null Hypothesis: LKR_PER_POUND_STERLING has a unit root
Exogenous: Constant, Linear Trend
Lag Length: 0 (Automatic - based on SIC, maxlag=10)

		t-Statistic	Prob.*
Augmented Dickey-Fuller test statistic		-1.073510	0.9252
Test critical values:	1% level	-4.110440	
	5% level	-3.482763	
	10% level	-3.169372	

*MacKinnon (1996) one-sided p-values.

Augmented Dickey-Fuller Test Equation
Dependent Variable: D(LKR_PER_POUND_STERLING)
Method: Least Squares
Date: 06/08/24 Time: 21:00
Sample (adjusted): 1961 2023
Included observations: 63 after adjustments

Variable	Coefficient	Std. Error	t-Statistic	Prob.
LKR_PER_POUND_STERLING(...	-0.087688	0.081683	-1.073510	0.2873
C	-8.061106	7.109898	-1.133786	0.2614
@TREND("1960")	0.718209	0.406637	1.766217	0.0824

R-squared	0.076044	Mean dependent var	6.183369
Adjusted R-squared	0.045245	S.D. dependent var	24.19125
S.E. of regression	23.63765	Akaike info criterion	9.210007
Sum squared resid	33524.31	Schwarz criterion	9.312061
Log likelihood	-287.1152	Hannan-Quinn criter.	9.250145
F-statistic	2.469068	Durbin-Watson stat	2.024063
Prob(F-statistic)	0.093227		

List of Reference

Japan Yen in LKR

Series: LKR_PER_JAPAN_YEN Workfile: DATA SET 1960-2023::U...

View | Proc | Object | Properties | Print | Name | Freeze | Sample | Genr | Sheet | Graph | Stats | Ident

Augmented Dickey-Fuller Unit Root Test on LKR_PER_JAPAN_YEN

Null Hypothesis: LKR_PER_JAPAN_YEN has a unit root
Exogenous: Constant, Linear Trend
Lag Length: 10 (Automatic - based on SIC, maxlag=10)

		t-Statistic	Prob.*
Augmented Dickey-Fuller test statistic		-1.153236	0.9096
Test critical values:	1% level	-4.140858	
	5% level	-3.496960	
	10% level	-3.177579	

*MacKinnon (1996) one-sided p-values.

Augmented Dickey-Fuller Test Equation
Dependent Variable: D(LKR_PER_JAPAN_YEN)
Method: Least Squares
Date: 06/08/24 Time: 21:02
Sample (adjusted): 1971 2023
Included observations: 53 after adjustments

Variable	Coefficient	Std. Error	t-Statistic	Prob.
LKR_PER_JAPAN_YEN(-1)	-0.122193	0.105957	-1.153236	0.2557
D(LKR_PER_JAPAN_YEN(-1))	-0.147701	0.188986	-0.781543	0.4391
D(LKR_PER_JAPAN_YEN(-2))	-0.330806	0.237406	-1.393422	0.1712
D(LKR_PER_JAPAN_YEN(-3))	-0.717449	0.240353	-2.984982	0.0048
D(LKR_PER_JAPAN_YEN(-4))	-0.289261	0.271696	-1.064648	0.2934
D(LKR_PER_JAPAN_YEN(-5))	-0.566678	0.250198	-2.264924	0.0290
D(LKR_PER_JAPAN_YEN(-6))	-0.512829	0.263851	-1.943630	0.0590
D(LKR_PER_JAPAN_YEN(-7))	-0.651294	0.272586	-2.389314	0.0217
D(LKR_PER_JAPAN_YEN(-8))	-0.426075	0.290755	-1.465410	0.1506
D(LKR_PER_JAPAN_YEN(-9))	-1.561360	0.301745	-5.174434	0.0000
D(LKR_PER_JAPAN_YEN(-10))	1.030511	0.420037	2.453381	0.0186
C	-0.166525	0.084319	-1.974944	0.0552
@TREND("1960")	0.010994	0.004284	2.566371	0.0141

Indian Rupee (INR) in LKR

Series: LKR_PER_INR Workfile: DATA SET 1960-2023::U...

View | Proc | Object | Properties | Print | Name | Freeze | Sample | Genr | Sheet | Graph | Stats | Id

Augmented Dickey-Fuller Unit Root Test on LKR_PER_INR

Null Hypothesis: LKR_PER_INR has a unit root
Exogenous: Constant, Linear Trend
Lag Length: 0 (Automatic - based on SIC, maxlag=10)

		t-Statistic	Prob.*
Augmented Dickey-Fuller test statistic		-2.170931	0.4970
Test critical values:	1% level	-4.110440	
	5% level	-3.482763	
	10% level	-3.169372	

*MacKinnon (1996) one-sided p-values.

Augmented Dickey-Fuller Test Equation
Dependent Variable: D(LKR_PER_INR)
Method: Least Squares
Date: 06/08/24 Time: 21:09
Sample (adjusted): 1961 2023
Included observations: 63 after adjustments

Variable	Coefficient	Std. Error	t-Statistic	Prob.
LKR_PER_INR(-1)	-0.182722	0.084168	-2.170931	0.0339
C	0.133030	0.101330	1.312840	0.1942
@TREND("1960")	0.007606	0.003322	2.289336	0.0256

R-squared	0.085252	Mean dependent var	0.046394
Adjusted R-squared	0.054760	S.D. dependent var	0.302705
S.E. of regression	0.294300	Akaike info criterion	0.438014
Sum squared resid	5.196751	Schwarz criterion	0.540068
Log likelihood	-10.79744	Hannan-Quinn criter.	0.478152
F-statistic	2.795920	Durbin-Watson stat	2.057029
Prob(F-statistic)	0.069031		

Dummy (Inward or Outward oriented Policy)

Tourist Arrivals

Series: DUMMY Workfile: DATA SET 1960-2023::Untitle...

View | Proc | Object | Properties | Print | Name | Freeze | Sample | Genr | Sheet | Graph | Stats | Ide

Augmented Dickey-Fuller Unit Root Test on DUMMY

Null Hypothesis: DUMMY has a unit root
Exogenous: Constant, Linear Trend
Lag Length: 0 (Automatic - based on SIC, maxlag=10)

		t-Statistic	Prob.*
Augmented Dickey-Fuller test statistic		-1.596569	0.7834
Test critical values:	1% level	-4.110440	
	5% level	-3.482763	
	10% level	-3.169372	

*MacKinnon (1996) one-sided p-values.

Augmented Dickey-Fuller Test Equation
Dependent Variable: D(DUMMY)
Method: Least Squares
Date: 06/08/24 Time: 21:11
Sample (adjusted): 1961 2023
Included observations: 63 after adjustments

Variable	Coefficient	Std. Error	t-Statistic	Prob.
DUMMY(-1)	-0.088417	0.055379	-1.596569	0.1156
C	0.050368	0.032609	1.544598	0.1277
@TREND("1960")	0.000939	0.001352	0.694970	0.4898

R-squared	0.051280	Mean dependent var	0.015873
Adjusted R-squared	0.019656	S.D. dependent var	0.125988
S.E. of regression	0.124744	Akaike info criterion	-1.278662
Sum squared resid	0.933661	Schwarz criterion	-1.176608
Log likelihood	43.27784	Hannan-Quinn criter.	-1.238523
F-statistic	1.621560	Durbin-Watson stat	1.960962
Prob(F-statistic)	0.206129		

Series: TOURIST_ARRIVALS Workfile: DATA SET 1960-2023::U...

View | Proc | Object | Properties | Print | Name | Freeze | Sample | Genr | Sheet | Graph | Stats | Ident

Augmented Dickey-Fuller Unit Root Test on TOURIST_ARRIVALS

Null Hypothesis: TOURIST_ARRIVALS has a unit root
Exogenous: Constant, Linear Trend
Lag Length: 10 (Automatic - based on SIC, maxlag=10)

		t-Statistic	Prob.*
Augmented Dickey-Fuller test statistic		4.089356	1.0000
Test critical values:	1% level	-4.140858	
	5% level	-3.496960	
	10% level	-3.177579	

*MacKinnon (1996) one-sided p-values.

Augmented Dickey-Fuller Test Equation
Dependent Variable: D(TOURIST_ARRIVALS)
Method: Least Squares
Date: 06/08/24 Time: 21:22
Sample (adjusted): 1971 2023
Included observations: 53 after adjustments

Variable	Coefficient	Std. Error	t-Statistic	Prob.
TOURIST_ARRIVALS(-1)	1.375855	0.336448	4.089356	0.0002
D(TOURIST_ARRIVALS(-1))	-0.839492	0.379127	-2.214277	0.0326
D(TOURIST_ARRIVALS(-2))	-2.063987	0.316391	-6.523536	0.0000
D(TOURIST_ARRIVALS(-3))	-0.905901	0.351980	-2.573727	0.0139
D(TOURIST_ARRIVALS(-4))	-2.454247	0.519641	-4.722969	0.0000
D(TOURIST_ARRIVALS(-5))	-1.237419	0.601624	-2.056799	0.0463
D(TOURIST_ARRIVALS(-6))	-2.101437	0.531990	-3.950144	0.0003
D(TOURIST_ARRIVALS(-7))	-1.842996	0.585017	-3.150330	0.0031
D(TOURIST_ARRIVALS(-8))	-0.875748	0.549888	-1.592595	0.1191
D(TOURIST_ARRIVALS(-9))	-2.370160	0.501183	-4.729133	0.0000
D(TOURIST_ARRIVALS(-10))	-2.187272	0.621290	-3.520536	0.0011
C	140133.9	84452.65	1.659319	0.1049
@TREND("1960")	-9952.342	4344.326	-2.290883	0.0273

1.2 Screenshots of Augmented Dickey Fuller (ADF) Test at the first difference I (I)

USD in LKR

Series: LKR_PER_USD Workfile: DATA SET 1960-2023::...

View | Proc | Object | Properties | Print | Name | Freeze | Sample | Genr | Sheet | Graph | Stats | Id

Augmented Dickey-Fuller Unit Root Test on D(LKR_PER_USD,2)

Null Hypothesis: D(LKR_PER_USD,2) has a unit root
Exogenous: Constant, Linear Trend
Lag Length: 1 (Automatic - based on SIC, maxlag=10)

		t-Statistic	Prob.*
Augmented Dickey-Fuller test statistic		-13.36322	0.0000
Test critical values:	1% level	-4.118444	
	5% level	-3.486509	
	10% level	-3.171541	

*MacKinnon (1996) one-sided p-values.

Augmented Dickey-Fuller Test Equation
Dependent Variable: D(LKR_PER_USD,3)
Method: Least Squares
Date: 06/08/24 Time: 20:46
Sample (adjusted): 1964 2023
Included observations: 60 after adjustments

Variable	Coefficient	Std. Error	t-Statistic	Prob.
D(LKR_PER_USD(-1),2)	-2.498984	0.187005	-13.36322	0.0000
D(LKR_PER_USD(-1),3)	0.671735	0.112634	5.963865	0.0000
C	-0.693937	1.041105	-0.666538	0.5078
@TREND("1960")	0.041905	0.027826	1.505952	0.1377

R-squared	0.841343	Mean dependent var	-0.211500
Adjusted R-squared	0.832843	S.D. dependent var	9.034695
S.E. of regression	3.693815	Akaike info criterion	5.515537
Sum squared resid	764.0790	Schwarz criterion	5.655160
Log likelihood	-161.4661	Hannan-Quinn criter.	5.570151
F-statistic	98.98754	Durbin-Watson stat	2.016198
Prob(F-statistic)	0.000000		

GBP (Pound Sterling) in LKR

Series: LKR_PER_POUND_STERLING Workfile: DATA SET 1960-2023::...

View | Proc | Object | Properties | Print | Name | Freeze | Sample | Genr | Sheet | Graph | Stats | Ident

Augmented Dickey-Fuller Unit Root Test on D(LKR_PER_POUND_STERLING)

Null Hypothesis: D(LKR_PER_POUND_STERLING) has a unit root
Exogenous: Constant, Linear Trend
Lag Length: 0 (Automatic - based on SIC, maxlag=10)

		t-Statistic	Prob.*
Augmented Dickey-Fuller test statistic		-8.419870	0.0000
Test critical values:	1% level	-4.113017	
	5% level	-3.483970	
	10% level	-3.170071	

*MacKinnon (1996) one-sided p-values.

Augmented Dickey-Fuller Test Equation
Dependent Variable: D(LKR_PER_POUND_STERLING,2)
Method: Least Squares
Date: 06/08/24 Time: 20:58
Sample (adjusted): 1962 2023
Included observations: 62 after adjustments

Variable	Coefficient	Std. Error	t-Statistic	Prob.
D(LKR_PER_POUND_STERLING(-1))	-1.152925	0.136929	-8.419870	0.0000
C	-5.255081	6.331552	-0.829983	0.4099
@TREND("1960")	0.387976	0.178270	2.176341	0.0335

R-squared	0.546785	Mean dependent var	-0.720631
Adjusted R-squared	0.531422	S.D. dependent var	34.78235
S.E. of regression	23.80948	Akaike info criterion	9.225222
Sum squared resid	33446.59	Schwarz criterion	9.328148
Log likelihood	-282.9819	Hannan-Quinn criter.	9.265633
F-statistic	35.59054	Durbin-Watson stat	1.964170
Prob(F-statistic)	0.000000		

The Impact of Exchange Rate Fluctuation on Tourist Arrivals of Sri Lanka

Japan Yen in LKR

Series: LKR_PER_JAPAN_YEN Workfile: DATA SET 1960-2023::Unt...

View | Proc | Object | Properties | Print | Name | Freeze | Sample | Genr | Sheet | Graph | Stats | Ident

Augmented Dickey-Fuller Unit Root Test on D(LKR_PER_JAPAN_YEN)

Null Hypothesis: D(LKR_PER_JAPAN_YEN) has a unit root
Exogenous: Constant, Linear Trend
Lag Length: 10 (Automatic - based on SIC, maxlag=10)

		t-Statistic	Prob.*
Augmented Dickey-Fuller test statistic		-4.900311	0.0011
Test critical values:	1% level	-4.144584	
	5% level	-3.498692	
	10% level	-3.178578	

*MacKinnon (1996) one-sided p-values.

Augmented Dickey-Fuller Test Equation
Dependent Variable: D(LKR_PER_JAPAN_YEN,2)
Method: Least Squares
Date: 06/08/24 Time: 21:05
Sample (adjusted): 1972 2023
Included observations: 52 after adjustments

Variable	Coefficient	Std. Error	t-Statistic	Prob.
D(LKR_PER_JAPAN_YEN(-1))	-8.370144	1.708084	-4.900311	0.0000
D(LKR_PER_JAPAN_YEN(-1),2)	7.187744	1.642386	4.376402	0.0001
D(LKR_PER_JAPAN_YEN(-2),2)	6.824055	1.596744	4.273731	0.0001
D(LKR_PER_JAPAN_YEN(-3),2)	6.216180	1.539272	4.038391	0.0002
D(LKR_PER_JAPAN_YEN(-4),2)	5.869322	1.403072	4.183192	0.0002
D(LKR_PER_JAPAN_YEN(-5),2)	4.938005	1.249715	3.951304	0.0003
D(LKR_PER_JAPAN_YEN(-6),2)	4.253035	1.111756	3.825512	0.0005
D(LKR_PER_JAPAN_YEN(-7),2)	3.378759	0.949548	3.558283	0.0010
D(LKR_PER_JAPAN_YEN(-8),2)	2.777845	0.827795	3.355715	0.0018
D(LKR_PER_JAPAN_YEN(-9),2)	0.934752	0.667942	1.399450	0.1696
D(LKR_PER_JAPAN_YEN(-10),2)	1.675369	0.465143	3.601832	0.0009
C	-0.168565	0.047926	-3.517181	0.0011
@TREND("1960")	0.011214	0.002317	4.840443	0.0000

Indian Rupee (INR) in LKR

Series: LKR_PER_INR Workfile: DATA SET 1960-2023::U...

View | Proc | Object | Properties | Print | Name | Freeze | Sample | Genr | Sheet | Graph | Stats | Id

Augmented Dickey-Fuller Unit Root Test on D(LKR_PER_INR)

Null Hypothesis: D(LKR_PER_INR) has a unit root
Exogenous: Constant, Linear Trend
Lag Length: 0 (Automatic - based on SIC, maxlag=10)

		t-Statistic	Prob.*
Augmented Dickey-Fuller test statistic		-8.991679	0.0000
Test critical values:	1% level	-4.113017	
	5% level	-3.483970	
	10% level	-3.170071	

*MacKinnon (1996) one-sided p-values.

Augmented Dickey-Fuller Test Equation
Dependent Variable: D(LKR_PER_INR,2)
Method: Least Squares
Date: 06/08/24 Time: 21:07
Sample (adjusted): 1962 2023
Included observations: 62 after adjustments

Variable	Coefficient	Std. Error	t-Statistic	Prob.
D(LKR_PER_INR(-1))	-1.222212	0.135927	-8.991679	0.0000
C	-0.025672	0.079611	-0.322472	0.7482
@TREND("1960")	0.002640	0.002183	1.209301	0.2314

R-squared	0.579152	Mean dependent var	-0.011236
Adjusted R-squared	0.564885	S.D. dependent var	0.457016
S.E. of regression	0.301462	Akaike info criterion	0.486834
Sum squared resid	5.361895	Schwarz criterion	0.589760
Log likelihood	-12.09187	Hannan-Quinn criter.	0.527246
F-statistic	40.59648	Durbin-Watson stat	1.950266
Prob(F-statistic)	0.000000		

Dummy (Inward or Outward oriented Policy)

Series: DUMMY Workfile: DATA SET 1960-2023::Untit...

View | Proc | Object | Properties | Print | Name | Freeze | Sample | Genr | Sheet | Graph | Stats

Augmented Dickey-Fuller Unit Root Test on D(DUMMY)

Null Hypothesis: D(DUMMY) has a unit root
Exogenous: Constant, Linear Trend
Lag Length: 0 (Automatic - based on SIC, maxlag=10)

		t-Statistic	Prob.*
Augmented Dickey-Fuller test statistic		-7.907055	0.0000
Test critical values:	1% level	-4.113017	
	5% level	-3.483970	
	10% level	-3.170071	

*MacKinnon (1996) one-sided p-values.

Augmented Dickey-Fuller Test Equation
Dependent Variable: D(DUMMY,2)
Method: Least Squares
Date: 06/08/24 Time: 21:14
Sample (adjusted): 1962 2023
Included observations: 62 after adjustments

Variable	Coefficient	Std. Error	t-Statistic	Prob.
D(DUMMY(-1))	-1.028202	0.130036	-7.907055	0.0000
C	0.042624	0.034173	1.247295	0.2172
@TREND("1960")	-0.000801	0.000915	-0.875322	0.3849

R-squared	0.514502	Mean dependent var	0.000000
Adjusted R-squared	0.498044	S.D. dependent var	0.181071
S.E. of regression	0.128287	Akaike info criterion	-1.221915
Sum squared resid	0.970997	Schwarz criterion	-1.118989
Log likelihood	40.87937	Hannan-Quinn criter.	-1.181504
F-statistic	31.26229	Durbin-Watson stat	2.003329
Prob(F-statistic)	0.000000		

Tourist Arrivals

Series: DUMMY Workfile: DATA SET 1960-2023::Untit...

View | Proc | Object | Properties | Print | Name | Freeze | Sample | Genr | Sheet | Graph | Stats

Null Hypothesis: D(DUMMY) has a unit root
Exogenous: Constant, Linear Trend
Lag Length: 0 (Automatic - based on SIC, maxlag=10)

		t-Statistic	Prob.*
Augmented Dickey-Fuller test statistic		-7.907055	0.0000
Test critical values:	1% level	-4.113017	
	5% level	-3.483970	
	10% level	-3.170071	

*MacKinnon (1996) one-sided p-values.

Augmented Dickey-Fuller Test Equation
Dependent Variable: D(DUMMY,2)
Method: Least Squares
Date: 06/08/24 Time: 21:14
Sample (adjusted): 1961- 2023
Included observation... 63 after adjustments

Variable	Coefficient	Std. Error	t-Statistic	Prob.
D(DUMMY(-1))	-1.028202	0.130036	-7.907055	0.0000
C	0.042624	0.034173	1.247295	0.2172
@TREND("1960")	-0.000801	0.000915	-0.875322	0.3849

R-squared	0.514502	Mean dependent var	0.000000
Adjusted R-squared	0.498044	S.D. dependent var	0.181071
S.E. of regression	0.128287	Akaike info criterion	-1.221915
Sum squared resid	0.970997	Schwarz criterion	-1.118989
Log likelihood	40.87937	Hannan-Quinn criter.	-1.181504
F-statistic	31.26229	Durbin-Watson stat	2.003329
Prob(F-statistic)	0.000000		

6.2 Annexure 2 – Output of Multiple Regression generated from SPSS

Variables Entered/Removed

Model	Variables Entered	Variables Removed	Method
1	FirstDifferenceDummyEconomyPolicy, FirstDifferenceINRinLKR, FirstDifferenceUSDinLKR, FirstDifferenceJapanYeninLKR, FirstDifferencePoundSterlinginLKR[a]	.	Enter

a. All requested variables entered.

b. Dependent Variable: FirstDifferenceTouristArrivals

Model Summary

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	**.212[a]**	**.045**	-.039	245007.851

a. Predictors: (Constant), FirstDifferenceDummyEconomyPolicy, FirstDifferenceINRinLKR, FirstDifferenceUSDinLKR, FirstDifferenceJapanYeninLKR, FirstDifferencePoundSterlinginLKR

ANOVA[b]

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	1.613E11	5	3.226E10	.537	**.747[a]**
	Residual	3.422E12	57	6.003E10		
	Total	3.583E12	62			

a. Predictors: (Constant), FirstDifferenceDummyEconomyPolicy, FirstDifferenceINRinLKR, FirstDifferenceUSDinLKR, FirstDifferenceJapanYeninLKR, FirstDifferencePoundSterlinginLKR

b. Dependent Variable: FirstDifferenceTouristArrivals

Coefficients

Model		Unstandardized Coefficients		Standardized Coefficients	t	**Sig.**	**Collinearity Statistics**	
		B	Std. Error	Beta			Tolerance	VIF
1	(Constant)	30965.688	40104.124		.772	.443		
	FirstDifferenceUSDinLKR	-2426.250	7589.846	-.044	-.320	**.750**	**.869**	**1.151**
	FirstDifferencePoundSterlinginLKR	2871.736	2876.545	.289	.998	**.322**	**.300**	**4.001**
	FirstDifferenceJapanYeninLKR	-539752.806	365327.739	-.335	-1.477	**.145**	**.327**	**3.060**
	FirstDifferenceINRinLKR	64830.226	210179.748	.082	.308	**.759**	**.239**	**4.182**
	FirstDifferenceDummyEconomyPolicy	-25429.918	248672.551	-.013	-.102	**.919**	**.986**	**1.014**

a. Dependent Variable: FirstDifferenceTouristArrivals