

## FORECASTING SRI LANKAN TOURIST ARRIVALS: TIME SERIES APPROACH

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Tourism is one of the earnings producing industries in a developing country which provide to the financial system. For that, forecasting tourist arrivals is an essential thing to construct policy resolutions to expand conveniences plus extra related issues in this industry. In this research study, Sri Lankan monthly tourist arrivals data from January 2000 to December 2017 is used. The approach of seasonal autoregressive integrated moving average (SARIMA) method was implemented to forecast tourist arrivals in Sri Lanka. In the modelling implementation, data was analysed based on the two types such as long-term (2000-2017) and post-war (2010-2017). Because of the Sri Lankan Civil War ended in 2009, the data were categorized into two types. Using the Augment-Dickey-Fuller (ADF) test and Kwiatkowski-Phillips-Schmidt-Shin (KPSS) test, the stationarity of the data is affirmed to be stationary on the first difference. And, the Autocorrelation Function (ACF) and Partial-Autocorrelation (PACF) plots were applied to determine the suitable model. The best SARIMA model was selected based on the minimum Akaike information criterion (AIC) value. The required statistical analysis was performed using Eviews9 and Minitab-16 software at 5% of significance level. The results reveals that for the long-term and post-war period, ARIMA (3,1,2)(1,0,1)<sub>12</sub> and ARIMA (2,1,3)(1,0,0)<sub>12</sub> are the suitable models respectively to sketch and to forecast the monthly tourist arrival pattern in Sri Lanka with a very precise extent by it satisfies the model assumptions as well as it indicates that forecasted and actual tourist arrivals are not much deviated from each other.

**Keywords:** *Forecasting, SARIMA, Tourist arrival*