

**FORECASTING THE TOURIST ARRIVALS TO SRI LANKA AND  
IDENTIFYING SOME INFLUENTIAL FACTORS**

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*By*

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## ABSTRACT

Tourism is ranked as the fourth largest earner of foreign exchange in Sri Lanka and generates a lot of employment opportunities. Tourist arrival forecasts could be very useful to the organizations that provide goods and services to the tourists.

The main objectives of this study are to forecast the future values of the tourist arrivals and to determine the factors influencing the tourist arrivals. Tourist Arrivals statistics for the study was obtained from the Tourist Board Annual Bulletins and comprised of 35 years monthly data (420 data points) from 1967 to 2001. Annual total capacities of airline seats and hotel rooms were also obtained from the same bulletin. Annual average USD exchange rates and Colombo Consumer Price Indexes (CCPI) were obtained from Central Bank Annual Report, 2003.

Univariate and Multivariate Time series modeling approaches were used to forecast the tourist arrivals and to determine the influential variables for the variation in tourist arrivals. Bayesian Time Series analysis and dynamic modeling approaches were used to apply subjective intervention and fine tune the forecast model. A Seasonal ARIMA was fitted on monthly tourist arrival data from 1967 to 2001 and short term forecasting of tourist arrivals was done based on this model.

Multivariate analysis was applied to annual data and forecast results were compared with the univariate forecast of annual data. The multivariate model out performed the univariate model and it was concluded that Airline Seat capacity, US\$ exchange rates, tourism prices and hotel rooms availability are few of the important variables in determining tourist arrivals to the country.

The forecasted values were tested by checking the forecasted values for January to March 2002 as against the actual data. The application of the intervention analysis resulted in a better forecast over the ARIMA, Winters' and decomposition methods. The latter methods were not able to incorporate the effects due to the terrorist attacks at Colombo Airport during July 2001, whereas Bayesian technique with Intervention analysis took that effect into the model.