

Modelling Night Occupancy of Domestic Tourists in the Colombo District of Sri Lanka

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Domestic tourism is an important segment that ensures the sustainable development of the tourism industry in Sri Lanka. Colombo district marked the second-highest domestic occupancy in the country. This study focused on forecasting night occupancy of domestic tourists in the Colombo district of Sri Lanka. Monthly data of night occupancy of domestic tourists from January 2008 to December 2020 were obtained from the Sri Lanka Tourism Development Authority (SLTDA). Sama Circular Model (SCM), Seasonal Auto-Regressive Integrated Moving Average (SARIMA) and Winter's three-parameter models were tested. The ACF and the Anderson-Darling normality test were used for model validation. The results revealed that the SCM satisfies the model validation criterion, whereas SARIMA and Winter's do not. It is concluded that the SCM is the best-fitting model for forecasting night occupancy of domestic tourists in the Colombo district of Sri Lanka. It is strongly recommended to forecast the night occupancy of domestic tourists in other districts as well.

Keywords: *Sama Circular Model, domestic tourist, night occupancy*