

# **TIME SERIES ANALYSIS OF COLOMBO TEA AUCTION PRICE DATA**

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## ABSTRACT

The Colombo Tea Auction is considered to be the Price decider of Made Teas in Sri Lanka. It is a Market driven Auction and Price fluctuations are decided according to the Buyers. The problem of these Price changes over a period of time affects the Manufacturers and the Tea Industry as a whole. According to Price Data, Tea Auction Prices have been on the rise throughout the past decade (2005-2014). This study focus on using Univariate Time Series Analysis techniques to determine the Trends of Price Data changes in Colombo Tea Auction related to its Locations of Origin; High grown, Medium grown, Low grown and All Island.

This study is used to determine the best fit Auto Regressive Integrated Moving Average (ARIMA) models related to each Price category and use the models to Forecast Price Data. The ARIMA models with the Seasonal factor (SARIMA) were found to be the most appropriate models. Seasonal factor is a result of 50 weekly sales dates and it affects the Trends. S Curve method is used to compare Forecasts of ARIMA model Forecasting.

*Keywords* - Price, Location of Origin, Time Series Analysis, ARIMA, Forecasting