

Forecasting: principles and practice

Exercises: Set 7

11 November 2013

Before doing any exercises in R, load the **fpp** package using `library(fpp)`.

1. For this exercise, use the monthly Australian short-term overseas visitors data, May 1985–April 2005. (Data set: `visitors`.)

Compare:

- (a) an ETS model;
- (b) an additive ETS model applied to a Box-Cox transformed series;
- (c) a seasonal naive method applied to the Box-Cox transformed series;
- (d) an STL decomposition applied to the Box-Cox transformed data followed by an ETS model applied to the seasonally adjusted (transformed) data.

For each model, look at the residual diagnostics and compare the forecasts on a test set of the last two years.

2. Why is a Box-Cox transformation unhelpful for the `cangas` data?
3. Download the data at <http://robjhyndman.com/data/retail.xls>. Choose *one* of the series and develop the best forecasting model you can for it using one of the methods we have discussed so far. Save the results because we will compare these forecasts with those from other models later in the course.