

Problem set

Smoothing

Search the internet site <http://bos.business.uab.edu> for the series “US Retail Sales, Gasoline Service Stations; not adjusted; millions of dollars.” The series has information from 1986:01 to 1999:01. Download it and provide the following analysis.

- (a) Plot the series and generate two trends, a linear trend, and a second of your choice. Predict the values for the next four months.
- (b) Estimate a 5-period moving average for forecasting. Predict the value for February of 1999.
- (c) Forecast February of 1999 using Simple Exponential Smoothing.
- (d) Forecast 4 periods ahead using Winter’s Exponential Smoothing.
- (e) Compare the forecasts for February from all methods, and compute an average of the forecasts. Which forecast would you consider more “reliable” and why?