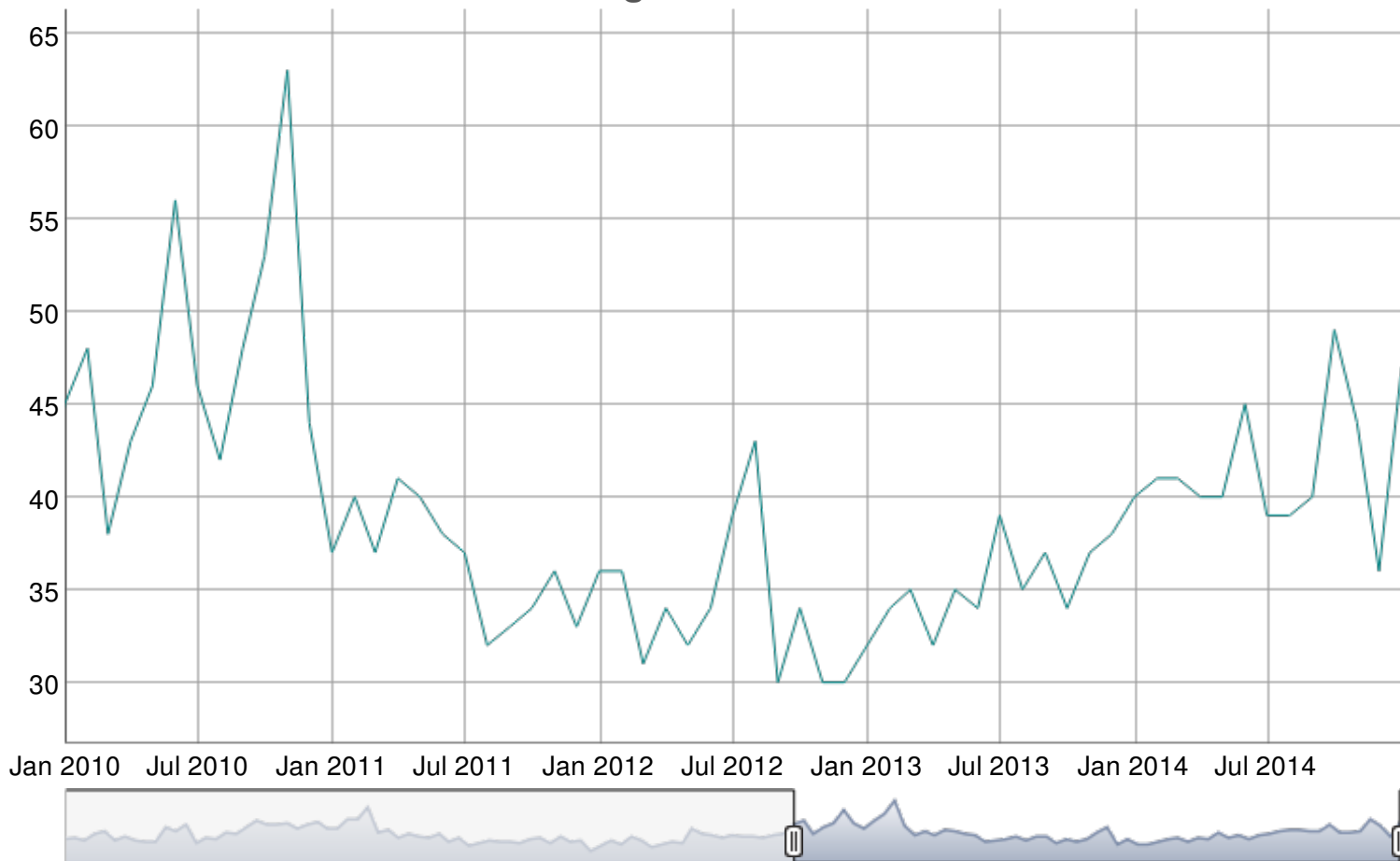# Time series analysis

Time series analysis comprises methods for analyzing time series data in order to extract meaningful statistics and other characteristics of the data. *Time series forecasting is the use of a model to predict future values based on previously observed values.*

Note:The dataset has been downloaded from Google Trends.Google Trends is a public web facility of Google Inc., based on Google Search, that shows how often a particular search-term is entered relative to the total search-volume across various regions of the world, and in various languages.
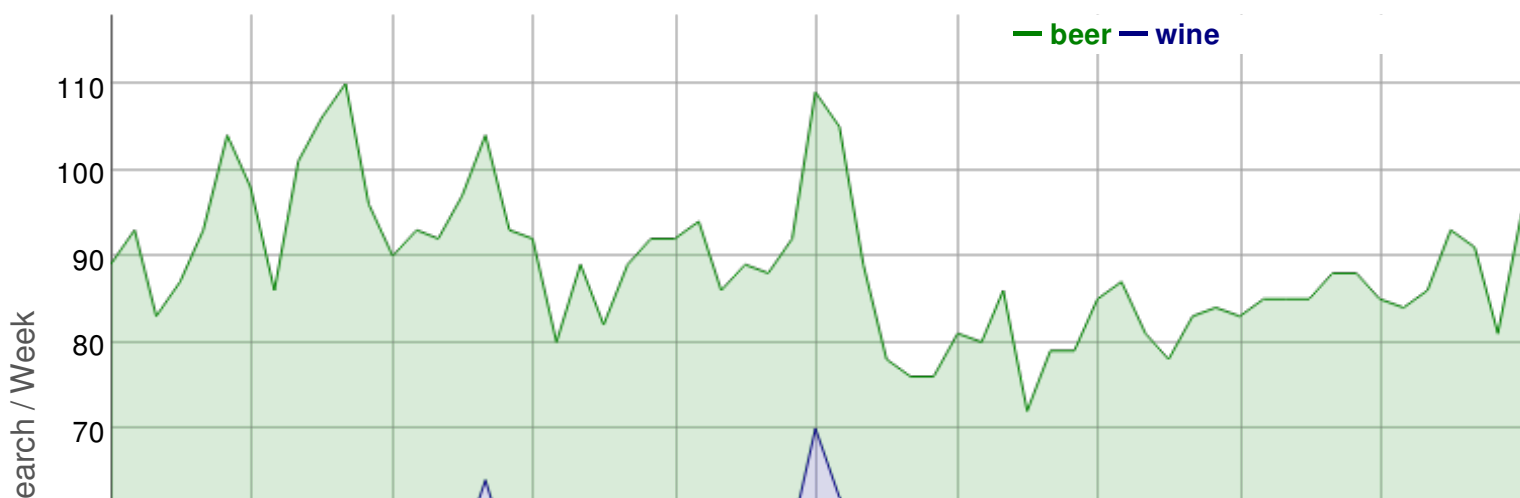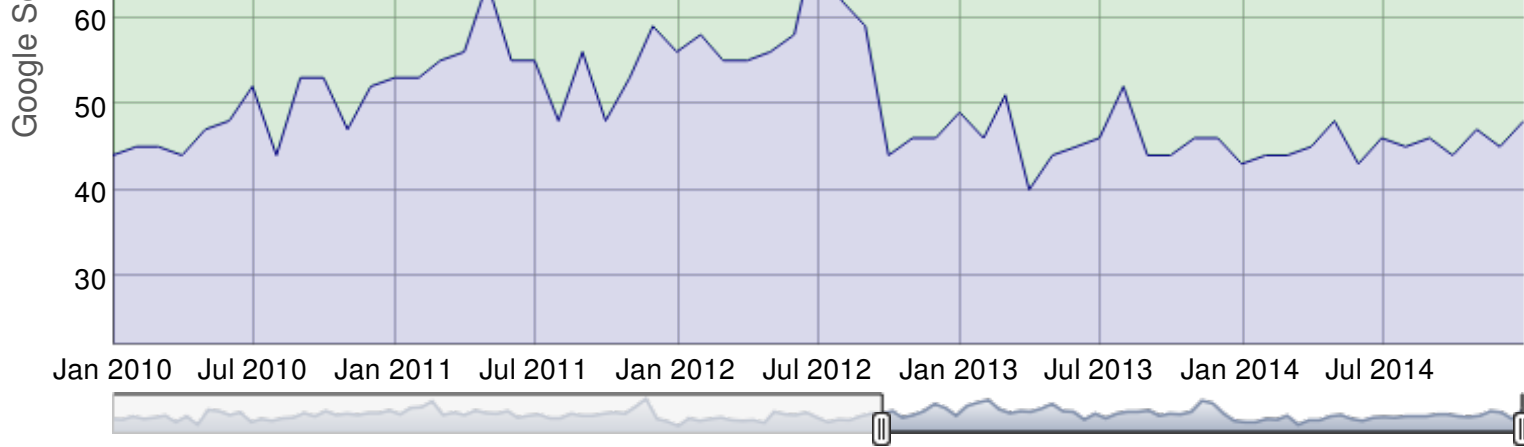
Trends on beer from 2010-2015

Google Trends

Trends on beer versus wine from 2010-2015

Web Search Beer vs Wine

— beer — wine

Predict wine web search for the next 36 months

```
        fit      upr      lwr
[1,] 46.05067 58.80815 33.29320
[2,] 48.00040 61.19843 34.80236
[3,] 45.11715 58.74626 31.48804
[4,] 48.29480 62.34640 34.24319
[5,] 46.00538 60.47167 31.53910
[6,] 48.63028 63.50413 33.75644
```

Plot prediction values

Predicted Wine Web Search